MARINE RECORD

ESTABLISHED 1878.

VOL. XXI, No. 30. CLEVELAND---JULY 28, 1898---CHICAGO. $2.00 Per Year. 5c. Single Copy

LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

PRESIDENT.

JAMES S. DUNHAM, Chicago

VICE PRESIDENTS.

H. A. Hawgood,	Cleveland	Leander Burdick,	Toledo
David Vance,	Milwaukee	M. J. Cummings,	Oswego
C. W. Elphicke,	Chicago	Alvin Neal,	Port Huron
A. A. Parker,	Detroit	James McBrier,	Erie
G. L. Douglas,	Buffalo	J. H. Westbrook,	Ogdensburg
G. A. Tomlinson,	Duluth	F. W. Gilchrist,	Alpena
Chas. A. Eddy,	Bay City	G. E. Tener,	Fairport
F. J. Firth,	Philadelphia		

SECRETARY.

CHARLES H. KEEP, Buffalo

TREASURER.

GEORGE P. MCKAY, Cleveland

COUNSEL.

HARVEY D. GOULDER, Cleveland

EXECUTIVE COMMITTEE.

James Corrigan,	Cleveland	William Gerlach,	Cleveland
H. A. Hawgood,	Cleveland	L. C. Waldo,	Detroit
Thos. Wilson,	Cleveland	D. C. Whitney,	Detroit
M. A. Bradley,	Cleveland	W. P. Henry,	Buffalo
John Mitchell,	Cleveland	J. J. H. Brown,	Buffalo
L. M. Bowers,	Cleveland	E. C. Maytham,	Buffalo
H. G. Dalton,	Cleveland	R. P. Fitzgerald,	Milwaukee
W. C. Richardson,	Cleveland	C. W. Elphicke,	Chicago
B. L. Pennington,	Cleveland		

COMMITTEE ON AIDS TO NAVIGATION.

George P. McKay,	Cleveland	W. M. Egan,	Chicago
W. H. Becker,	Cleveland	W. A. Livingtone,	Detroit
John W. Moore,	Cleveland	J. H. Westbrook,	Ogdensburg
W. A. Hawgood,	Cleveland	A. W. Colton,	Toledo
Thos. Wilson,	Cleveland	James Davidson,	West Bay City
C. E. Benham,	Cleveland	Alvin Neal,	Port Huron
H. Coulby,	Cleveland	M. M. Drake,	Buffalo
J. G. Keith,	Chicago	W. W. Smith,	Sault Ste Marie

COMMITTEE ON LEGISLATION.

G. L. Douglas,	Buffalo	Wm. Livingstone,	Detroit
E. T. Evans,	Buffalo	C. A. Eddy,	Bay City
P. P. Miller,	Buffalo	Alex. McDougall,	West Superior
H. C. French,	Buffalo	F. J. Firth,	Philadelphia
Charles Paine,	Buffalo	Jas. E. Davidson,	West Bay City
Edward Smith,	Buffalo	D. Sullivan,	Chicago
L. C. Hanna,	Cleveland	W. E. Fitzgerald,	Milwaukee
James Corrigan,	Cleveland		

BOARD OF MANAGERS.

E. Gaskin,	Buffalo	L. C. Waldo,	Detroit
Peter P. Miller,	Buffalo	J. W. Westcott,	Detroit
E. T. Evans,	Buffalo	D. T. Helm,	Chicago
G. L. Douglas,	Buffalo	Jesse Spaulding,	Chicago
Charles Paine,	Buffalo	J. S. Dunham,	Chicago
J. J. H. Brown,	Buffalo	John Keith,	Chicago
John Kelderhouse,	Buffalo	Joseph Austrian,	Chicago
W. H. Gratwick,	Buffalo	W. R. Owen,	Chicago
M. M. Drake,	Buffalo	C. W. Elphicke,	Chicago
W. P. Henry,	Buffalo	Wiley M. Eagan,	Chicago
Edward Smith,	Buffalo	J. J. Rardon,	Chicago
W. C. Farrington,	Buffalo	J. H. Channon	Chicago
H. C. French,	Buffalo	James A. Calbick,	Chicago
C. H. Donaldson,	Buffalo	W. S. Brainard,	Toledo
James McKenzie,	Buffalo	A. W. Colton,	Toledo
Thos. Wilson,	Cleveland	Leander Burdick,	Toledo
M. A. Bradley,	Cleveland	L. S. Sullivan,	Toledo
James Corrigan,	Cleveland	James Davidson,	Bay City
H. M. Hanna,	Cleveland	Charles A. Eddy,	Bay City
Geo. P. McKay,	Cleveland	O. W. Blodgett,	Bay City
H. G. Dalton,	Cleveland	F. W. Wheeler,	Bay City
Harvey H. Brown,	Cleveland	B. Boutelle,	Bay City
John W. Moore,	Cleveland	Thomas Cranage,	Bay City
B. L. Pennington,	Cleveland	Howard L. Shaw,	Bay City
John Corrigan,	Cleveland	J. W. McGraw,	Bay City
Wm. Gerlach,	Cleveland	Alex. McDougall,	Duluth
Henry A. Hawgood,	Cleveland	F. N. La Salle,	Duluth
W. C. Richardson,	Cleveland	G. A. Tomlinson,	Duluth
J. C. Gilchrist,	Cleveland	A. B. Wolvin,	Duluth
W. D. Rees,	Cleveland	David Vance,	Milwaukee
John Mitchell,	Cleveland	R. P. Fitzgerald,	Milwaukee
R. R. Rhodes,	Cleveland	H. J. Pauly,	Milwaukee
Caleb E. Gowan,	Cleveland	W. H. Wolf,	Milwaukee
L. M. Bowers,	Cleveland	W. H. Meyer,	Milwaukee
W. H. Becker,	Cleveland	James McBrier,	Erie
W. A. Hawgood,	Cleveland	Geo. Berriman,	Erie
W. H. Mack,	Cleveland	F. W. Gilchrist,	Alpena
C. E. Benham,	Cleveland	Alvin Neal,	Port Huron
James W. Millen,	Detroit	C. T. Morley,	Marine City
W. Livingstone, Jr.,	Detroit	R. E. Schuck,	Sandusky
David Carter,	Detroit	Frank J. Firth,	Philadelphia
D. C Whitney,	Detroit	J. H. Westbrook,	Ogdensburg
W. A. Livingstone,	Detroit	G. E. Tener,	Fairport
A. A. Parker,	Detroit		

NAVAL SHIPPING OFFICE.

While engaged in making a tour of the western lake cities, shipping sailors, landsmen, machinists and others for the navy Commander Hawley, U. S. N., succeeded in securing the consent of the Navy Department for the establishment of a permanent naval recruting station at Chicago, the only one in the middle west. This station opened up for business in rooms in the Masonic Temple secured by Commander Hawley before he left Chicago on his return to Washington. It is in charge of Lieut. Commander Holman Vail, who will have associated with him, Surgeon Moore and Chief Engineer Borthwick, both retired officers, and Boatswain Hudson.

The plan of operations is to recruit at Chicago and as soon as 40 or 50 men have been enlisted to send them to the nearest navy yard where they may be needed, in charge of one of the officers named. Permission has been given to the commanding officer of the U. S. S. Michigan, now at Erie, Pa., to accept recruits so long as the present war continues, but beyond this and continuing the Chicago station permanently the navy will do no more recruting in the west unless some unforeseen emergency arises.

NEW NAVAL VESSELS.

The Navy Department has issued an advertisement calling for proposals for constructing by contract four harbor defense monitors provided for by the naval appropriation bill. The bids will be opened Saturday, October 1.

It is a matter of regret to the naval designers that the limit of cost for these vessels fixed by Congress is so low as to make it necessary to build the monitors of very small tonnage, and of lighter battery power than is desirable in these advance days, but the construction bureau has managed to prepare plans that will, after all, result in a very serviceable type of harbor defense vessels.

A NEW LAKE ERIE LIGHT-HOUSE.

Major Symons, Corps of Engineers, U. S. A., and engineer for the light-house district with headquarters at Buffalo, has completed a tour of the eastern part of the tenth district. He reports matters in good condition, only a few minor changes and repairs being found necessary at this time. Major Symons will now make a tour of inspection of the stations along Lake Erie. A quantity of supplies will be taken on the tender Warington. During his absence he will look over the ground for the new light-house and fog signal at the end of the long channel in Maumee bay, leading into Toledo harbor. An appropriation of $75,000 was recently secured for the purpose of its construction.

In this connection we may again point out that the engineering work devolves upon an officer of the corps of engineers, U. S. A., and the inspection, discipline, etc., after the aid is established to an officer of the navy especially detailed for each district.

NEW YORK'S DECLINING TRADE.

The governor of New York has appointed a commission to ascertain why the commerce of that state and city is falling off, while there has been a continuous gain in that of other coast cities. Thirty years ago New York city handled seven-tenths of the exports and imports of the country; now, notwithstanding its increase in population and favorable legislation, it handles less than five-tenths. Boston, without a river or a canal, has doubled her foreign trade; Baltimore and New Orleans have advanced enormously, and a number of smaller cities, like Newport News and Brunswick, by their railway and harbor facilities, are becoming conspicuous, particularly in the export trade. Shippers understand the reasons why New York is losing her prominence in the export trade and can give the commission plenty of information and advice.

The men who have been appointed to make the investigation are Charles A. Shieren, Andrew H. Green, Mr. Hewitt, C. C. Shayne, Hugh Kelley, and Alexander R. Smith. The commission must make a report and "recommend such legislation as in their opinion" may be necessary to the next Legislature.

THE FLUCTUATION OF LAKE LEVELS.

A scientific discussion by the foremost of American engineers of the great problem of whether or not the fluctuations of water levels throughout the Great Lakes can be regulated, will be the chief feature of interest in the thirtieth annual convention of the American Society of Engineers held in Detroit this week.

Capt. Hiram M. Chittenden, of the United States Corps of Engineers, now in Cuba, has prepared an extensive paper, in which he reaches the conclusion that a regulation of the lake levels is impossible and impracticable. His views will raise a storm of protests from able scientists, among them L. E. Cooley, consulting engineer of the New York commission for the investigation of the improvement of Erie canal, and formerly trustee and chief engineer of the Chicago drainage canal, and Geo. Y. Wisner, of Detroit, engineer and member of the United States board on deep waterways.

Capt. Chittenden's contention is that nature herself is regulating the water levels as far as is possible, and that a restriction of the flow of water by an artificial reservoir in the Niagara will only serve to increase the fluctuations in the levels. This he demonstrates to his satisfaction by carefully worked out mathematical problems through an intricate and complex series of arguments.

There are many premises in his paper to which fellow members of the society, who have made a long and close study of the lake levels, take exception. One is his assumption of a mean lake level in June of each year, when it is said that a mean level cannot be applied to any individual year, since the maximum supply and discharge of waters in some occurs in May, and others in June and July. Another premise with regard to water levels between lake and outlet, his opponents say, holds true with regard to Lake Superior, but is untrue with regard to Lake Huron, the St. Clair river and Lake St. Clair. The peculiar conditions existing between Lake Huron and river St. Clair, these students of the lake levels say, have been entirely overlooked by Capt. Chittenden, they assert, and they add that while his premises are theoretically correct, practically, as applied to the levels of the Great Lakes, they are not.

During the convention papers will be read as follows:

"Experiments on the flow of water in the six-foot steel and wood pipe line of the Pioneer Electric Power Co., at Ogden, Utah," by Chas. D. Marx, M. Am. Soc. C. E.; Chas. B. Wing, Asso. M. Am. Soc. S. E., and Leander M. Hopkins, C. E. "The determination of the safe working stress for railway bridges of wrought iron and steel," by E. Herbert Stone, M. Am. Soc. C. E. "Marine wood borers," by Chas. H. Snow, Am. Soc. C. E. "Dredges and dredging on the Mississippi river," by J. A. Ockerson, M. Am. Soc. C. E. "Reservoir system of the Great Lakes of the St. Lawrence basin; its relation to the problem of improving the navigation of these bodies of water and their connecting channels," by Capt. Hiram M. Chittenden, corps of engineers, U. S. A. "With a mathematical analysis of the influence of reservoirs upon stream flow," by James A. Seddon, Esq. "Three hinged masonry arches; long spans especially considered," by David A. Molitor, M. Am. Soc. C. E.

WRECKING OPERATIONS AT SANTIAGO.

With the hope of recovering a portion of Cervera's stranded fleet the Navy Department promptly arranged therefor with the Merritt & Chapman Co., of New York, who early dispatched its tugs Right Arm, John G. Jones and J. J. Merritt to Santiago. The company, it is said, is guaranteed against loss from the capture of any of its vessels, and will receive a bounty for bringing any of the stranded ships north, amounting to about $100,000 for each ship. The firm is paid a per diem rate, with 25 per cent. reduction for time occupied by the voyage to Santiago. The government paid the wrecking company $781 per day for its work on the Maine, and the present contract is supposed to be at the same figure. Reports are conflicting as to just how many of the vessels may be saved with a view of utilization in the navy.

NEWS AROUND THE LAKES.

CHICAGO.

Special Correspondence to The Marine Record.

A. L. Fitch chartered the steamer C. A. Eddy for corn to Erie at 1 cent.

J. W. Squires of Marine City, vessel owner, has been spending a few days in Chicago.

Capt. John Prindiville chartered the steamer Vega for corn to Buffalo at ⅞ of a cent.

The steamer Nicaragua arrived here Tuesday with a cargo of 80,000 bushels of wheat from Duluth.

There was a fair demand for grain-carrying vessels Tuesday at 1 cent per bushel on corn to Buffalo.

The steamer New Orleans which has been laid up at this port since June 22 last, has been chartered this week.

At the yards of the Chicago Shipbuilding Co., the steamer Massachusetts is in dock for repairs to her stern bearing.

J. J. Rardon & Co. chartered the steamer Rosedale for corn to Kingston at 1⅞ cents, the steamer Brazil for wheat at 1 cent, and corn ⅞ of a cent to Buffalo.

At the Chicago floating dry dock the tug Mollie Spencer is on for some general repairs and calking, the steamer R. J. Jordan was on for repairs to rudder and some calking, the fin keel yacht Siren for bottom cleaning.

The Dunham Towing and Wrecking Co. have chartered their tug L. B. Johnson to the Goodrich Trans. Co., who will put her in service at Manitowoc while their tug Arctic is being rebuilt at that port by Burger& Burger, shipbuilders.

The Burke Transportation company, which is now operating the steamer T. S. Faxton, between Chicago, Waukegan and Kenosha, will buy or build a large boat for next season. Traffic on the route has been larger than anticipated, the showing of local freight being particularly good. The line is to be operated during the winter, making an all-the-year-service.

One of the best gangs of lumber shovers on Chicago river recently unloaded the steamer J. W. Stephenson's cargo, consisting of 748,000 feet of lumber, in 8 hours, at 2 docks, one part of the load at the South Side Lumber Co.'s , and the remainder at Fuller's Lumber Co., at the stock yards. Captain John Nicholson, master of the Stephenson, is in constant attendance when the steamer is being unloaded.

The side-wheel steamer City of Milwaukee of the Graham & Morton Trans. Co., carried 4,392 passengers between Saturday noon and Sunday night on two round trips between Chicago and St. Joseph and an excursion out of St. Joseph on Sunday afternoon. The company's steamers City of Chicago and City of Louisville also carried their full capacity of passengers between Saturday night and Monday morning.

The barge Harold, with coal for Baker Bros., when going up the south branch of Chicago river, at 1 o'clock Sunday morning, had her main and mizen masts carried away by collision with Harrison street bridge, which was swung on to her as she was going through one of the draws. A similar accident occurred to the steamer Viking at Chicago avenue bridge during 4th of July week. Surely the bridge tenders do not intend celebrating the 4th all this month. Even if such is the case, their time is nearly up anyway.

Emil Field, aged about 30 years, single, hailing from Manistee, Mich., a sailor on the schooner A. G. Morey, was drowned on Friday last in St. Joseph river. The schooner was being towed up the river to Peters' Lumber Yard and the deceased was in the yawl which had been lowered; the painter fouled and the boat capsized, throwing the unfortunate sailor into the river. He came to the surface and a life preserver was thrown to him, but the poor fellow was seized with cramps and could not attempt to catch hold of it, although he was an expert swimmer. The body of the deceased was recovered by the St. Joseph life saving crew. An inquest was held and a verdict of accidental drowning returned.

BUFFALO.

Special Correspondence to The Marine Record.

The steamer Commodore has received a thorough overhauling and calking this week at the Mills dry dock.

The compass of the foundered steamer Idaho, sunk off Long Point was recovered by the divers on their recent expedition.

Arrivals are keeping up fairly well, and if anything, improving. It is now thought that a more brisk time will set in until the end of the season.

The Erie canal is doing fairly good work, and the officials state that the business will compare favorably with that of other years, although there has been about thirty days less navigation than last year.

The Union Dry Dock Co. has just closed a contract for the construction of two wooden dredges for T. A. Gillespie & Co., New York. They are to be 103 feet 4 inches in length, and 34 feet beam. Work will be begun at once. When completed, the dredges are to go to Massena.

The common council has ordered Buffalo creek to be dredged in order to abate the flood nuisance in the southern part of the city. The plan under which the work is to be done provides for widening the river to a channel of 230 feet bottom width, a depth of 20 feet below low water mark, which is 3 feet below the datum line of city levels, with slope sides from 1½ to 2 feet.

A Chicago special states that the steamer Edward Smith, sunk by the Aurania at the St. Clair Flats, Sunday, has been abandoned to the underwriters as a constructive total loss. It is not thought that the abandoment will hold, as the cost of raising and repairing the wreck is hardly likely to equal 50 per cent. of her policy value, and the underwriters have a wrecking outfit alongside, with every prospect of getting the sunken vessel to a dry dock.

The Union liner Chemung, which has been laid up for some time, has been chartered for grain from Toledo. The Owego is back in the Chicago trade, and now that business is picking up again, they will likely be kept close at work for the balance of the season. It is well known that the grain rate out of Toledo has been as good as the Chicago figure, and as there is over one thousand miles difference in the distance, the Toledo charter may be considered a good starter for the Chemung.

Two officers from the Dominion Steamboat Inspection Service are here this week looking over the passenger boats engaged in plying across to Canada. The wonder is why these officers don't examine the boats when they are in Canadian waters, instead of coming to Buffalo to do so. All inspections of foreign passenger steamers takes place in a United States port and not by our officers at their home ports, as it appears the Dominion officers are doing ; but, no doubt there is a plausible reason for this apparent change around.

The U. S. Engineer Department has chartered for the season the tug Portia, recently purchased by Capt Edward H. Maytham from Mr. Tobey, of Toledo. She will be used on the survey on the lower end of Lake Erie and Niagara river. The Portia is a smart looking, handy little craft, and the engineer corps are lucky in finding her fitted out and ready for service in their new work. It is now thought that Capt. Maytham will purchase another tug for ferrying purposes to and from the breakwater, where large improvements are being carried on.

The Engineering News, New York, contains a page illustrated article on the new bridge built by the Donnelly Contracting Co. across the branch of the canal known as "Niagara Slip." The canal spanned by this bridge connects the Erie canal proper with Buffalo harbor, and two large cofferdams were needed to shut off the water ; then deep and large concrete abutments were built, and the whole work completed with unqualified success. This bridge is in daily use by 250 or more trains, and three trains have often been on the bridge at one time. The completion of this important work has added to the prestige of the well known Donnelly Contracting Co., withwhom is Mr. Wm. Pierson Judson, M. Am. Soc. C. E., a gentleman well known as an expert in his profession.

The survey of Niagara river in the interest of the deep waterways movement began on Tuesday. A detachment of engineers and assistants arrived from Cleveland, and operations have begun at Horseshoe reef, and will extend as far as Slosser's dock, near Niagara Falls. The work will consist of soundings with special reference to the condition of the bottom, the currents and other matters that have to do with the cost of deepening the water by dredging and blasting. The headquarters of the survey will be maintained at Fort Erie. When the survey of the Niagara is completed the expedition will resume soundings on Lake Ontario, the section extending as far east as Olcott, N. Y., where it is taken up by another set of engineers.

CLEVELAND.

Special Correspondence to The Marine Record.

Capt. Benham, Jr., has qualified and taken charge of the steamer H. B. Tuttle, vice Capt. McLeod, resigned to join the navy.

Deputy Snyder, of the United States marshal's office, tied up the steamer John T. Mott on Tuesday, on a libel preferred by the owners of the steamer James Rooney. This was done to collect a bill for $897.47.

The Pittsburg, Bessemer & Lake Erie and the United States & Ontario Steam Navigation Co. have made new arrangements, by which the transfer steamers will run from Conneaut to Port Stanley instead of Port Dover.

The large steel tow barge, John Fritz, has just loaded her first cargo at Duluth, carrying 6,890 tons on a mean draft of 17 feet 1 inch. This cargo is figured out at 7,795 tons net, allowing for dampness in the ore, and counting short tons.

The revenue cutter Onondago built by the Globe Iron Works Co., is now about ready to start for the coast, and her crew has been ordered aboard to report for duty. The official trial trip held last week was highly satisfactory to the government officials, and one of the best little craft afloat may soon be added to the navy list.

Last week the steamer Presque Isle, carried nearly 7,000 net tons on her maiden trip. This week the steel tow barge Fritz, comes near the 8,000 ton mark also on her first cargo. The tow barge carried in long tons, 2,240 pounds to the ton, about the weight the steamer loaded in short, or net tons, allowing two per cent. for moisture in the ore.

The Canadian locks at the "Soo" are being used almost entirely by some masters, as they claim that they get much better treatment there than they do on the American side. It is a very dangerous undertaking to send a man ashore with a line when the wind is blowing hard, and several men have lost their lives trying to do it. Masters say that the officials of the American locks refuse to take a line from them, while the Canadian officials are always ready and willing to help them.

At the election of officers of the Chase Machine Co., James L. Chase was made president and general manager; Walter Williamson, vice-president and Frederick Metcalf, secretary and treasurer. Mr. Chase was 15 years a lake engineer and has been master mechanic as well as general manager of the company since its formation. Mr. Williamson was connected with the McDermott & Williamson Twist Drill Co., and has much experience as foreman and superintendent. Mr. Metcalf is a Massachusetts Institute of Technology graduate in mechanical engineering and for a number of years has had experience in marine and hydraulic work. The company will manufacture the Chase steering gear, hoisting engines, and power and drop hammers, and do general job work in marine machinery and steam engineering lines.

There was placed on file in the Recorder's office on Wednesday the transfer of "Block L, Buffalo Company Allotment," from the Cleveland Dry Dock Co. to the Ship Owners' Dry Dock Co. The consideration stated is $100,000. The property thus described is the dry dock of the Cleveland Dry Dock Co., and the transfer marks the final step in the consolidation of the two companies. The stockholders of the reorganized Ship Owners' Dry Dock Co. met on Wednesday, and new directors and officers were elected. The directors are: H. M. Hanna, L. C. Hanna, Luther Allen, R. L. Newman, Capt. John Mitchell, H. A. Hawgood, and R. L. Ireland. H. A. Hawgood was elected president; Capt. John Mitchell, vice president; R. L. Ireland, treasurer, and Capt. W. W. Brown, secretary and manager. Capt. W. W. Brown will handle both docks as manager for the company, and his success as secretary and manager of the Cleveland Dry Dock Co. ought to insure the shareholders of fair returns for their investment.

The annual report of Colonel Jared A. Smith, Corps of Engineers, U. S. A., to the War Department, contains an elaborate, yet concise, account of the river and harbor work which is going on under his direct supervision at Cleveland, Toledo, Port Clinton, Sandusky, Huron, Vermillion, Lorain, Fairport, Ashtabula, Conneaut, and Monroe Harbor, Mich. Concerning the Cleveland improvements Colonel Smith says it will probably cost upwards of $600,000 to complete them as projected. This sum is additional to the amount already available, $680,851. The total sum appropriated for the harbor work at Cleveland since it commenced is $2,397,631.61, including the appropriation made this month before Congress adjourned. A large quantity of dredging is found to be necessary before the outer harbor at this port can be safely placed at a clear twenty feet all over, and the engineer recommends that such an expenditure be incurred in order to facilitate the general commerce. The assertion is freely made that the river and harbor work, and the conservancy and improvement of such, within this district, was never so well taken care of as under the present energetic and popular engineer.

Enlistments for the revenue cutter Onondaga are going forward rapidly, and she will doubtless succeed in securing her full quota of seventy men here. Among those who have enlisted this week are Capt. J. H. McLeod, of the steamer H. B. Tuttle, who will go as gunner, and Wm. J. Connell, who ships as boatswain. He was chief mate of the whaleback steamer City of Everett, which was the first merchant steamer to carry the American flag into the port of Calcutta on the occasion when she took a cargo of grain to the famine sufferers of India. The Onondaga will leave this port next week. The cruise of the whaleback, City of Everett, was, by the way, quite an extended one ; leaving San Francisco she touched at Manila and fueled at intermediate ports before reaching Calcutta ; from there she steamed via the Suez canal to Valencia, Bilbao and loaded in Huelva, Spain, for Charleston, S. C., thence to Tampa, Fla., where she loaded phosphate for New York, afterwards going in the coasting trade, all of which time Mr. Connell was her chief officer, a record which speaks highly for the gunner of the Onondaga. Capt McLeod is well known at several lake ports, and both are smart, skillful, energetic young men, such as the lake trade cannot too well afford to lose, but they glory in taking service under the "banner of the free."

DETROIT.

Special Correspondence to The Marine Record.

Assistant Secretary of the Treasury Spaulding remitted from $50 to $5, the fine imposed on the owner of the steamer J. S. Richards, of Detroit, for a failure to promptly renew her license.

Through the sinking of the Toledo yacht Clipper, near Green Island, while going to attend the annual regatta of the Interlake Yachting Association, two lives were lost. Their names were William Arbuckle and Marcus Battele, both of Toledo.

Capt. Benjamin Cole, a well-known lake sailor, died Sunday afternoon at his home 443 Fort street east, of apoplexy. He received a sunstroke in Ashland Saturday, which was the chief cause of his death. Capt. Cole was born in 1840 and had lived in Detroit over 50 years, not missing a season of the lakes for a period of forty years. His last service was a mate of the steamer Swallow. He leaves a widow and married sister.

There was quite a jam this week on account of the steamer John Mitchell grounding at the "Soo." The steamer Specular, upbound, in trying to get by, knocked a bucket off her wheel. The Maida, bound down in tow of the Maricopa, also struck the Mitchell and carried away part of the latter's stern. Boats were notified not to use the channel until the Mitchell had been released which was effected early on Tuesday morning after lightering about 150 tons of her cargo.

There has been some talk of a mutual marine insurance association, or club formed so as to cover wooden boats, as the rumor has gained ground that the present companies will not underwrite wooden hulls at all next season, or perhaps, only a few of the latest and best built. It is likely that the present insurance companies would just as soon see a few clubs formed and a certain class of tonnage enrolled therein, feeling sure that they will always secure the highest classed boats.

The paper by Prof. Charles H. Snow, of New York University, presented at the convention of the American Society of Civil Engineers held here this week, is a very interesting essay on marine wood borers, but, as they don't infest the lakes the article may not interest the majority of the readers of the RECORD. It appears that there are several species of the Teredo, and all engaged in coast shipping well know their destructive qualities, as they honeycomb the bottom planks of vessels that are not protected from their ravages.

The small wooden steamer J. J. Hill, built on the lakes for coast service, does not quite meet the requirements of a cargo boat, as she has been given no facilities for loading or discharging from hold to dock, or vice versa. Deck winches, derricks, etc., are used at coast ports and some facilities like the lake package freight boats have should have been, or may still be given her to make her suitable for the trade she is to go in, unless the Atlantic Transportation Co., who are her recent purchasers, intend to keep her in the Newport News coal trade all the time.

The Evening News says: "Since Frank E. Kirby has returned from New York, where he was engaged inspecting ships for the government, it is suggested by friends to have the title of colonel bestowed upon him." Now, anyone should know that the title of colonel would be a misnomer. Mr. Kirby's services were naval, if anything, and if he can't be Hobsonized, let us make him commodore, on account of his having jurisdiction over the auxiliary fleet, for he had nothing to do with the horse marines, although he is, no doubt, well up in naval armament, equipment and general, as well as special marine architecture.

Detroit has been made the northern terminal of the new Toledo, Cleveland, Oswego and Ogdensburg line of steamers controlled by the Northern Transit Company. The steamers of the new line traverse the Detroit river, the entire length of Lake Erie, Welland canal, Lake Ontario, running through the Thousand Islands and down the St. Lawrence river to Alexandria Bay and Ogdensburg where connections are made for the Canadian and eastern resorts. The headquarters of the Northern Transit Company are at Cleveland, O. W. A. Collier is the general manager, Farrasey & Marron, general agents of the line and John Stevenson is the local agent. The steamer Empire State left on her first trip from this port on Wednesday morning. The intended sailings of the steamers for August are: Empire State, Aug. 6, 15 and 24. Badger State, Aug. 1, 10, 20 and 29.

The steamer Edward Smith No. 2 was run into and sunk in Lake St. Clair, near the flats on Sunday morning by the Aurania, in tow of the propeller Aurora. The Smith was bound up, loaded, and without a consort while the Aurora and Aurania were bound down. Another large propeller was also bound down close to the tow and it is supposed the single propeller and tow got mixed up and in dodging the propeller crashed into the Aurania. The force of the blow sent the Smith to the west side of the channel and sunk her. The Aurania was damaged about the bows. The crew and a pleasure party on the Smith were rescued without accident and sent to the Old Club. The Smith is owned by the Mitchell Transportation Co., of Cleveland, and valued at $65,000. The Aurania is the property of James Corrigan of Cleveland, and is valued at $150,000. Captain Tuttle representing the Prime McCurdy syndicate carrying $50,000 of insurance, was immediately dispatched to the scene of the wreck with all assistance for raising the steamer and getting her to Detroit, she will, of course, be brought to this port for dry docking and survey but it is not known yet where the repairs will be made.

FLOTSAM, JETSAM AND LAGAN.

The steamer Bon Voyage was fined $50 this week by Collector Willcuts at Duluth, for having failed to surrender her license papers at their date of expiration.

The tug Record, sunk through collision at Duluth has been raised, and the bodies of the crew recovered with the exception of her late master Capt. J. J. Briquet.

The Raddatz submarine boat has had another very successful test at Milwaukee and it is expected that a larger boat will be built for further experimental purposes.

Capt. Otto Lehfeldt, of Milwaukee, died this week at the age of 68 years; he had seen a great deal of service in the U. S Navy as well as in the lake and ocean merchant service.

There is now a probability that the steamer Maine, which suffered fire damage at Tonawanda last fall and has been lying there full of water ever since, may be put into service again.

The upper Lake Superior ports, regardless of non-union rates, will hold their wages at 50 cents per hour. Such is the information given out by M. H. Robinson, president of the local 'longshoremen's union.

Since the establishment of the F. & P. M. car ferry and boat line from Ludington to that city, Manitowoc has experience an unprecedented growth. Several large elevators and storehouses have been built there.

The Canadian steamer Chamberlain, lumber laden from Penetanguishene to port Arthur, went ashore last Sunday on Battle Island, Lake Superior, in a dense fog. After jettisoning a large part of her cargo, the steamer was released on Tuesday with the assistance of the tug Georgiana.

The waters of Lake Superior are fast rising and it is strikingly shown in the size of cargoes taken into the boats. The depth of draft now is seventeen feet ten inches, when before July boats loaded as shallow as sixteen feet three inches.

The steamer A. B. Taylor, of Saugatuck, has been chartered by Pemberthy, Cook & Co. to run between Menominee and Manistee for the rest of the season; tri-weekly trips will be made. Capt. David Ramage, formerly of the tug Amos, has charge of the Taylor.

Chicago vesselmen fear that when business picks up they will be unable to secure sailors to man their vessels. Only half the schooner fleet is now in service, and there is serious complaint regarding the men to be had now. It is said that most of the best sailors have gone into the navy.

In giving practical effect to ideas it must, I think, be conceded that Americans are usually ahead of Britishers. The authorities at Tacoma, for instance, have appointed Miss May Fuller harbor-mistress. She is the only woman in the world holding such an office.—Shipping World, London.

The steel barge Polynesia cleared from Ashland on Saturday last with 5,850 gross tons of ore. She was picked up by the steamer Italia from Duluth towing the steel barge Australia with 5,900 gross tons of ore on board. This is like moving a small mine, and is the most iron ore that ever was swung on a tow line, both the barges are modern steel built craft.

Chicago excursion boats are deep in the struggle of a bitter rate war, and are carrying passengers free. The trouble is said to have arisen over the joint use of a landing place. Owners of excursion steamers ought to have more good judgment than getting at loggerheads with each other during the short time they have a chance to earn money.

The government has given notice to Hughes Bros. & Bangs, the contractors engaged in the construction of the new breakwater, opposite Lewes, Del., that the Navy Department will impress into the Umited States service for use in Cuba seven lighters and tugs of the firm. This puts the contractors in an unfortunate position in filling the contract for finishing the breakwater.

The Lake Michigan Lumber Carriers' Association is taking a rest. The rates of freight on lumber and cedar, which the vesselmen have vainly attempted to maintain all the summer, have been suspended for the season, and while the organization will be maintained in hopes of making it effective at a later day as a present factor in the lumber market, it has lost its position.

The State Board of Railway and Warehouse Commissioners of Minnesota is hearing the arguments for and against a reduction of the ore freights charged by the Duluth, Missabe & Northern, and Duluth & Iron Range Railways, at Duluth. The hearing is apt to be a protracted one, as a long array of legal talent has been retained by each party to the case, and the fight promises to be a warm one to the finish.

Chief Endicott, of the bureau of yards and docks, U. S. N. has succeeded in arranging for the purchase by the government of a floating dry dock. The dock is capable of lifting vessels up to 2,200 tons displacement, which will bring within its scope most of the gunboats in Sampson's fleet and a large number of the auxiliary vessels. It can be easily towed to Key West. The dock will be started on its way at the earliest possible moment.

The torpedo boat destroyer Farragut was successfully launched July 16. She is the first of her class built by the government, and the eighth fighting ship built for the government by the Union Iron Works, which has won a great reputation for good work. The Oregon and Olympia have shown what San Francisco's great shipyard can do and the other ships have exceeded requirements. The works and the ships are San Francisco's pride.

During a squall the schooner James G. Blaine was the cause of the damage to the schooner fleet at Chicago, by breaking adrift. Now the owners of the vessels which lost spars and rigging are asking that the owner of the Blaine settle the bills. He declines to do so on the ground that he had nothing to with the wind. The Lord did that, his attorney tells him, and the bills are not collectable in our courts. Much feeling has been stirred up over the dispute.

Seamen are pretty scarce at lake ports, and vessels bound for upper lake ports are stopping at Detroit and other river ports to fill out their crews. Good sailors are very hard to find. Members of the Lake Carriers' Association are having less trouble than the outside vesselmen, but the shipping masters are kept pretty busy getting men of any sort. Of course, the day for marlinspike sailors has passed, and except for the few vessels that set a cloth of canvas sometimes any old sort of roustabouts that could work enough would do, though if they had been properly bossed a few times it would make them all the handier around the deck, or at least there would be less danger of them dropping into the hold when she was "hollow."

LAKE MICHIGAN HARBOR IMPROVEMENTS.

Capt. Zinn, Corps of Engineers, U. S. A., in charge of river and harbor work at Milwaukee and vicinity, has made his annual report to the Chief of Engineers at Washington. He says that no work has been done in Milwaukee harbor during the year. Since the last report, however, the condition of the harbor piers has been steadily growing worse. The older portion of the superstruction of the south pier, about 600 feet long, is now in such an advanced state of decay that it is impossible to walk over it, and a southeasterly gale is liable at any time to make a breach in the pier. Repairs to the harbor piers are of the most urgent and pressing importance.

At the Milwaukee harbor of refuge work on the extension of the breakwater for 1,600 feet has been in progress during the year. Soundings taken in December showed a depth of water along main arm varying from 25 feet at the angle to 35 feet at the southerly end. The area covered by completed works outside the 13-foot contour is 165 acres, outside the 19-foot contour is 101 acres. After the completion of the present contract there will remain funds on hand sufficient to build 300 linear feet of superstructure, but owing to the failure of the river and harbor bill construction has been deferred until a further appropriation shall have been made.

At South Milwaukee harbor no material change is noted although work has been progressing.

During the year at Menominee harbor dredging and repairs to piers were begun. Both wil probably be completed this month. In Menominee river 58,583 cubic yards of material were removed during the year and the main channel was extended up the river 425 feet. Five thousand linear feet of the channel was dredged at places where shoaling had occurred.

At Green Bay harbor 250,000 cubic yards of material were dredged last summer and minor repairs were made to the revetments at Grassy island.

In Fox river dredging was continued and the ruling depth below Depere is now about 14 feet.

At Sturgeon Bay, the north revetment was extended 694 linear feet and the south revetment 1,085 linear feet. Excavations in the canal were continued and 44,165 cubic feet of material were removed. Capt. Zinn says the importance of the canal as a great maritime waterway is demonstrated by the fact that the commerce of last year was much greater than any previous year, and that it was more than 100 per cent. in excess of that passing through the last year it was owned by private parties.

At Sturgeon bay canal harbor of refuge dredging to deepen the channel was completed in July, 1897. It is expected that considerable dredging will be necessary to maintain the channel during the present year, and also in the spring of 1899, as considerable shoaling will probably take place.

At Ahnapee harbor dredging was continued and the pierheads were protected by fender piling. Minor repairs to the docking and superstructure of the piers were also made.

The extension of the north pier at Kewaunee harbor for 200 feet and the south pier 225 feet were completed last December. The channel is constantly filling, and it is believed that 30,000 cubic feet of material will have to be removed next season. The superstructure of the piers also needs constant repairs and Capt. Zinn urges that appropriations be made for this work.

At Manitowoc the south pier was extended 500 feet. This completes the project outlined for a 20-foot channel. The city of Manitowoc has contracted for dredging to extend the 20-foot channel one and one-quarter miles up the river.

Improvements in Sheboygan harbor was continued and the pile pier extension of 328 feet was completed.

At Port Washington harbor the rebuilding of the decayed superstructure was completed. The depth of the channel June 30 las was 11.5 feet.

Soundings in Racine harbor in April shawed a depth of 15 feet in the channel, having a greatest width of 225 feet and a least width of 60 feet. During the year 284 feet of improvement was built, making a total length of 565 feet. A shoal in the channel was also removed.

Improvement at Kenosha harbor was continued with good results. The same report is made of the work at Waukegan harbor, the project of the improvement at the latter place having been completed.

THE issue of Lloyd's Register of British and Foreign Shipping, 1898-9, contains full particulars of all iron and steel lake vessels exceeding 100 tons.

NOTICE TO MARINERS.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 9TH DISTRICT,
CHICAGO, ILL., July 23, 1898.

Notice is hereby given that the back can buoy Entrance Buoy Straight Channel, Green Bay, Wisconsin, has gone adrift. A black spar buoy has been established in its place and will be maintained until a gas buoy is placed, on or about August 1, 1898.

By order of the Light-House Board.

C. O. ALLIBONE,
Lieut. Com. U. S. N., Inspector 9th L. H. District.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 10TH DIST.
BUFFALO, N. Y., July 25th, 1898.

Notice is hereby given that the 25-foot spar-buoy, painted in red and black horizontal stripes, which has heretofore marked Round Island Shoal, St. Lawrence River, N. Y., will be discontinued on August 15th, 1898, as no longer required, the shoal which it has marked (Round or Dark Island Shoal) having been removed by dredging to a depth of 18 feet at low water.

FRANKLIN HANFORD,
Commander, U. S. N., Inspector 10th L. H. District.

By order of the Light-House Board.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—MICHIGAN.

TREASURY DEPARTMENT,
OFFICE OF THE LIGHT-HOUSE BOARD,
WASHINGTON, D. C., July 21, 1898.

LAKE ST. CLAIR TWENTY-FOOT CHANNEL LIGHTS—Notice is hereby given that, on or about July 28, 1898, the following named lights will be re-established to mark the lower reach of the twenty-foot channel, in the southwesterly part of Lake St. Clair:

MIDDLE BEACON—A fixed white lantern light, 15 feet above lake level, on a cluster of three piles recently erected in 14½ feet of water on the southeasterly side of the channel, and about ⅝ mile NE. ¼ E. from lower entrance (E. side) Beacon Light. Windmill Point Light-House, SW. by W. ⅞ W., about 2½ miles; Grossepoint Club House, NW. ⅜ N.

UPPER BEACON—A fixed white lantern light, 15 feet above lake level on a cluster of three piles recently erected in 16½ feet of water on the southeasterly side of the channel, and about 1⅜ miles NE. ¼ E. from middle Beacon Light. Grossepoint Club House, W. ¼ S.

Bearings are true and given approximately; miles are statute miles.

By order of the Light-House Board:

RUSH R. WALLACE,
Commodore, U. S. Navy, Chairman.

DOMINION OF CANADA—ONTARIO.

1.—RED SPAR BUOY SOUTH OF DUCK ISLANDS.—A red spar buoy has been moored by the government of Canada in 6 fathoms water off the south end of the southern shoal (Jeannie Graham shoal) extending southerly from Duck Islands, Lake Huron.

Lat. N. 45° 35′ 45″.
Long. W. 82° 53′ 15″.

The buoy is 3½ cables south of the shoalest spot, with 8 feet water on it, is situated S. by E. ⅝ E. 2⅔ miles from Duck Island light, and S. W. by S. $1\frac{9}{10}$ miles from the most southerly point of the outer Duck island.

Vessels approaching it from the westward should not bring it to bear south of S. E.; if from the eastward, nothing south of W. S. W.

F. GOURDEAU,
Deputy Minister of Marine and Fisheries.

Department of Marine and Fisheries,
Ottawa, Canada, 15th July, 1898.

☞All bearings, unless otherwise noted, are magnetic and are given from seaward, miles are nautical miles, heights are above high water, and all depths are at mean low water.

Pilots, masters, or others interested are earnestly requested to send information of dangers, changes in aids to navigation, notices of new shoals or channels, errors in publications, or any other facts affecting the navigation of Canadian waters to the Chief Engineer, Department of Marine and Fisheries, Ottawa, Canada.

TREASURY DECISIONS RELATING TO MARINE.

TREASURY DEPARTMENT, July 14, 1898.

To collectors of customs and others:

Your attention is invited to the following supplement, concerning mortgages on shipping, to Department Circular 109, Bureau of Navigation, June 15, 1898:

Mortgage or pledge, of lands, estate, or property, real or personal, heritable, or movable, whatsoever, where the same shall be made as a security for the payment of any definite and certain sum of money, lent at the time or previously due and owing or forborne to be paid, being payable; also any conveyance of any lands, estate or property whatsoever, in trust to be sold or otherwise converted into money, which shall be intended only as security, either by express stipulation or otherwise; on any of the foregoing exceeding one thousand dollars and not exceeding one thousand five hundred dollars, twenty-five cents; and on each five hundred dollars or fractional part thereof in excess of fifteen hundred dollars, twenty-five cents. Provided, that upon each and every assignment or transfer of a mortgage, lease or policy of insurance, or the renewal or continuance of any agreement, contract, or charter, by letter or otherwise, a stamp duty shall be required and paid at the same rate as that imposed on the original instrument.

O. L. SPAULDING, Acting Secretary.

SHIPPING ARTICLES.

Shipping commissioners advised to discourage use of "war clause" in shipping articles.

TREASURY DEPARTMENT,
BUREAU OF NAVIGATION,
WASHINGTON, D. C., July 14, 1898.

United States Shipping Commissioner, Boston, Mass.:

SIR: Replying to your letter of the 30th ultimo, with inclosure (shipping articles with so-called "war clause"), this Bureau has to say that in view of the destruction of the two Spanish fleets, and the improbability that the few remaining Spanish war vessels will ever be in a position to attack American merchant vessels, it fails to see any reason for the so-called "war clause," and reccommends you to discourage its use hereafter.

Respectfully yours,
E. T. CHAMBERLAIN, Commissioner.

Approved:
O. L. SPAULDING, Acting Secretary.

STAMPING CERTIFICATES OF DAMAGE TO VESSELS.

TREASURY DEPARTMENT,
OFFICE OF COMMISSIONER OF INTERNAL REVENUE,
WASHINGTON, D. C., July 18, 1898.

SIR: In reply to your letter of the 7th instant, you are informed that the certificates of damage to vessels and their machinery, given by you, require a 25-cent stamp only upon the original, not upon copies which may be made.

N. B. SCOTT, Commissioner.

MR. FRANK S. MARTIN, New York City.

SUN'S AMPLITUDES.

The following approximate amplitudes of the Sun's rising will be given each week in this column during the season of navigation. A second bearing may be taken by compass at sunset by reversing the east bearings given for the nearest latitude, as the change in declination for a few hours makes but a slight difference in the true bearing of the Sun's setting:

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.

Sunrise.	Bearing.	Bearing.
July 31	E. 25° N.	E. N. E. ¼ N.
August 3	E. 24° N.	E. N. E. ⅛ N.
August 7	E. 22° N.	E. N. E.

LAKE ONTARIO, S. END HURON AND CENTRAL PORTION LAKE MICHIGAN, LAT. 44° N.

Sunrise.	Bearing.	Bearing.
July 31	E. 26° N.	E. N. E. ¼ N.
August 3	E. 24° N.	E. N. E. ⅛ N.
August 7	E. 23° N.	E. N. E.

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.

Sunrise.	Bearing.	Bearing.
July 31	E. 27° N.	E. N. E. ⅜ N.
August 3	E. 26° N.	E. N. E. ¼ N.
August 7	E. 24° N.	E. N. E. ⅛ N.

LAKE SUPERIOR, LAT. 48° N.

Sunrise.	Bearing.	Bearing.
July 31	E. 28° N.	E. N. E. ½ N.
August 3	E. 27° N.	E. N. E. ⅜ N.
August 7	E. 25° N.	E. N. E. ¼ N.

With a compass correct magnetic, the difference between the observed and true bearing or amplitude will be the variation for the locality. Should there be any deviation on the course the vessel is heading at the time of taking the bearing, the difference between the observed and the true amplitude after the variation is applied, will be the amount of deviation on that course. If the correct magnetic bearing is to the right of the compass bearing, the deviation is easterly, if to the left, the deviation is westerly.

MARITIME LAW.

THE NIAGARA.

STAHL et al v. THE NIAGARA.—JOHNSON et al v SAME.

Circuit Court of Appeals. Second Circuit, January 25, 1898:

1. COLLISION—STEAMER—EXCESSIVE SPEED IN FOG.—From 9 to 10 knots an hour in a dense fog is excessive speed for a steamer not in an unfrequented part of the ocean.

2. SAME—DEFECTIVE EQUIPMENT—MECHANICAL FOG HORN.—Failure of a sailing vessel, which tested a mechanical fog horn before sailing for Cuba, to test the same, after a long stay at Havana, before starting on the return voyage, or at any time until shortly before collision, when it was found to be out of condition, so that a mouth horn had to be used, held to show such a defect in the equipment of the vessel as to place her fault for collision with a steamer which failed to hear the mouth horn.

3. SAME—HARTER ACT.—Failure to have a mechanical fog horn in good condition for use at the commencement of a voyage shows want of diligence in equipping the vessel, and is not a fault in her management, so as to excuse the owners from liability under the Harter act.

77 Fed. 329, affirmed.

Appeal from the District Court of the United States for the Southern District of New York.

THE LYMAN D. FOSTER.

HINDSGAUL v. THE LYMAN D. FOSTER.

District Court, D. Washington, N. D. March 5, 1898.

1. ADMIRALTY JURISDICTION—SUITS IN REM.—Admiralty rule 16 precludes a member of the crew from maintaining a suit in rem to recover damages for assaults and injuries inflicted by the captain.

2. FOREIGN COURTS—CRIMINAL JURISDICTION—ASSAULT IN HARBOR.—An assault committed on board a merchant vessel in a harbor within the territorial jurisdiction of a foreign country is within the jurisdiction of the courts of that country; and, if a member of the crew is there convicted and imprisoned, the judgment will be conclusive here, so that he cannot afterwards sue for wages, etc., on the theory that a wrong was done him at the instigation of the captain.

3. SAME—SHIPPING—IMPRISONMENT OF MATE IN FOREIGN COUNTRY.—Where a mate was imprisoned in a foreign country after conviction of an assault on the captain in the harbor, and the captain, when the ship was ready to sail, placed his wages for the time he was on board in the hands of the American consular agent, who paid therefrom the costs of the criminal prosecution, and turned over the remainder to the prisoner, held, that the ship was not liable for any misapplication, if there was one, made by such consular agent.

This was a libel in rem by Nils E. Hindsgaul against the schooner Lyman D. Foster to recover wages, expenses, and damages for an assault alleged to have been committed upon him by the master.

EASTERN FREIGHTS.

Messrs. Funch, Edye & Co., New York, furnishes the RECORD with the following eastern freight report:

We are sorry to say that our market for sailing vessels shows very little animation and is apparently weaker, although tonnage is anything but abundant. Case oil freights to the east have lost strength under a larger offering of tonnage, and no demand whatever is manifested for barrel oil to the North of Europe. Freights for naval stores from the south are likewise easier, and we hear of charter made at 2s. and 6d. for rosin, 3s. 9d. for spirits. Rates for lumber from the Provinces to South America are maintained, but it is a matter of some difficulty to secure a bid for timber from the Gulf or Atlantic Coast to Europe. General cargo freights to the Colonies are also dull and easier.

The fact, referred to in our last issue, of the liners filling up their available room is doubtless responsible for almost the entire list of grain fixtures. There is a noticeable absence of enquiry for smaller boats to Cork f. o., probably owing to the uncertainty still overhanging deliveries of new wheat in the near future. Promptish boats, in the meanwhile, are gradually being worked off, and charters in the near future will have to be made on basis of living freight rate, not based on vessels' necessities only. A fair amount of tonnage has again been placed under time charter, and several further fixtures effected for deals. The demand for timber has practically ceased for the moment, but we expect a revival of this enquiry ere very long.

HOMEWARD BOUND.

W. E. Leonard contributes the following characteristic notice of a late friend's death to the Sunday Herald, Port Huron, and as it is not so far off in the evolution of getting a ship under-way, we reprint it:

On June 30th, Capt. Thomas N. Dancey, who had been hove short at Goderich, got the order from the Great Admiral aloft to get under way for another planet. The brave sailor never flinched, took his station, called all hands, asked his first officer, "How is this wind, Mr. Topenlift?" West by north, sir. We will have to go on the port tack, said the old skipper, to weather old Cape Sin, when we will go in stays and give the rocks of fore-ordination a wide berth to leeward, which are to the south'ard of us, as our course is southeast by east, on the starboard tack, when we get an offing to the northward of Cape Sin. Lay aloft, my lads, reef the fore topsail, let it hang in the clew lines and bunt lines, reef the main and mizzen, back them for the port tack, set the spanker, haul the sheet for the port tack, set the main staysail, let go your down hauls for the jib and fore stay sail, let the courses hang in the buntlines until the anchor is up. Bear a hand, my lads, be lively with your work, as the admiral is watching us. The orders were obeyed, Mr. Topenlift gave the orders to man the windlass, the chain came rattling through the hawse-pipes, keeping time to the tune of the "Rale McCoy" that one of the lads was singing. The anchor was soon off the bottom, the breeze caught the spanker and topsails, her head swung off, let go and haul, sang Captain Tom; she gathered way and like a frightened deer she sped off on the port tack. As he got full and by Henry Marlton and William McKay joined him. As he swept past the church on East street he sung out, "So long!" but the dominie never heard him, and the boldest sailor that ever walked the docks at Goderich left for the spirit land at a speed of 40,000 miles a second, under reefed topsails, whole spanker, jib, fore staysail and main staysail.

OUR FOREIGN COMMERCE.

REPORT FROM THE BUREAU OF STATISTICS.

The record of this most remarkable year in the commerce of the United States becomes especially interesting when compared with that of preceding years. Not only does the year's record surpass that of any previous year in the total exportations and the exports of manufactured articles, but for the first time in the history of the country the exports are twice as great as the imports, and the exports of manufactures exceed the imports of manufactures. The value of the exportations of the fiscal year 1898 is more than seven times that of 1865, four times as much as in 1869, twice as much as in 1877, 60 per cent. more than in 1887, 20 per cent. in excess of the great commercial year of 1892, and $180,000,000 more than the greatest year of our export trade—1897. The balance of trade in our favor is more than double that of any previous year and nearly equal to that of the past five years combined. The net importations of gold exceed those of any preceding year in the history of the country, the total gold imports in excess of exports being for the full year $104,985,279, including coin, bullion and ore, while no preceding year ever reached the $100,000,000 line in net imports of gold. When to this is added the fact that the imports of merchandise of the year are less than in any year since 1885, and with this single exception, less than in any year since 1879, it becomes apparent that the record of the fiscal year 1898 is an altogether unusual one.

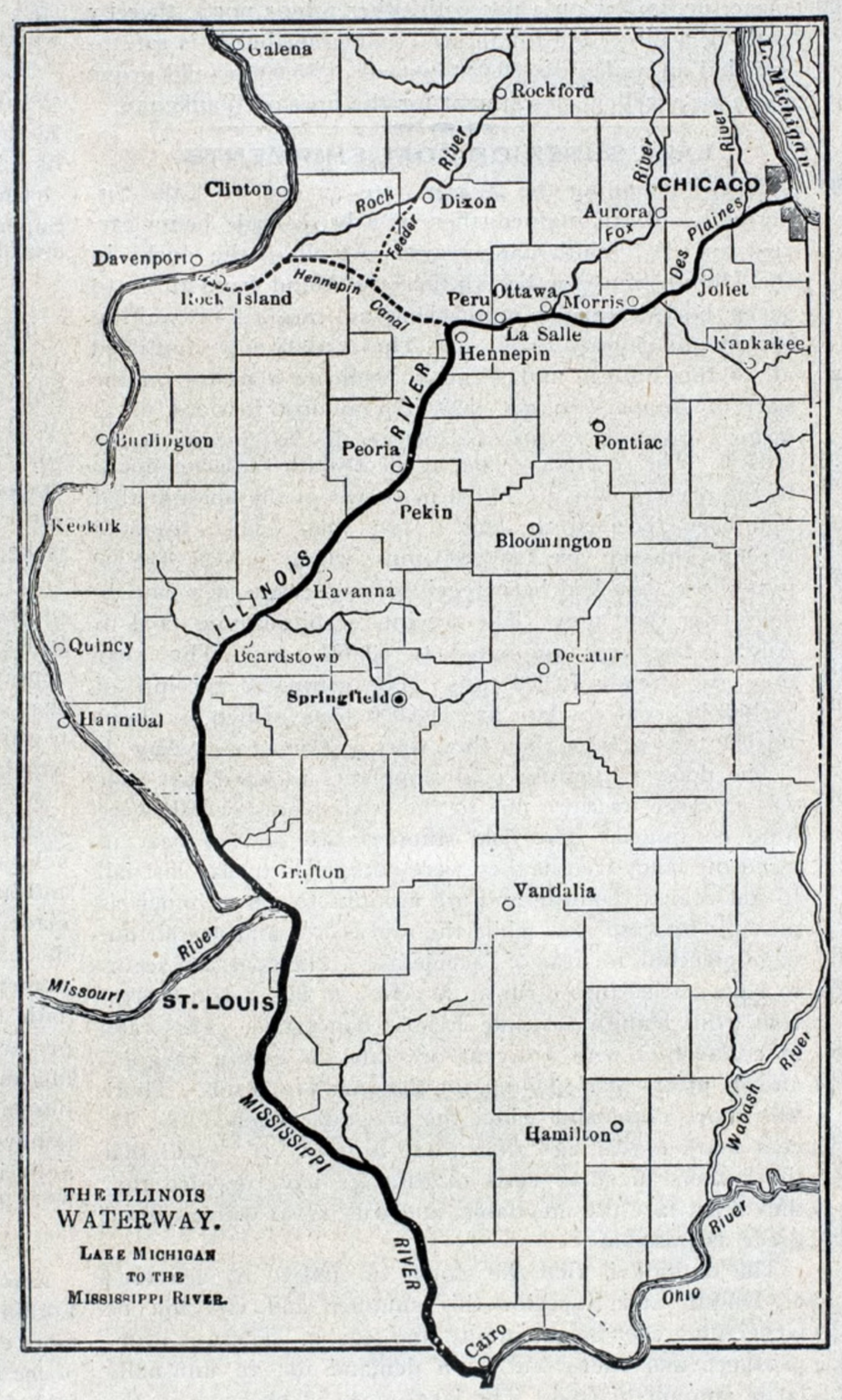
The balance of trade in our favor in the year under consideration is $615,259,024 against $286,263,144 in 1897, $264,661,666 in 1879, $259,712,718 in 1881, $257,814,234 in 1878, $237,145,950 in 1894, and $202,875,686 in 1892, while no other year except those mentioned, ever reached the $200,000,000 line in its balance of trade, or "excess of exports over imports" as it is termed in the official reports of the bureau of statistics. Indeed, it is only since 1875 that the balance of trade has been as a rule in our favor. From 1791 to 1876 there were but sixteen occasions in which the exports of the year exceeded the imports. Since that time, however, the balance of trade has been almost constantly in our favor, only three years—1888, 1889 and 1893—showing an excess of imports of merchandise over our exports. The excess of imports over exports in the 85 years prior to 1876 was $2,215,404,610, while the excess of exports over imports since that time has been $3,191,268,300. Thus the centennial year seems to have been a turning point in our commercial relations with other parts of the world. During the 85 years prior to that date the balance of trade was almost constantly against us, but since that time has been almost constantly in our favor, the excess of imports over exports in the 85 years prior to 1876 having been $2,215,404,610, and the excess of exports over imports in the 23 years since the beginning of that year having been $3,191,268,300.

Agricultural productions, of course, form a large proportion of the exportations, yet they do not form as large a proportion as in many preceding years. Only 71 per cent. of the exportations of the year 1898 are products of agriculture, while in 1894 they were over 72 per cent. of our total exports; in 1893, over 74 per cent.; in 1892, over 78 per cent.; in 1881, more than 82 per cent.; and in 1880, more than 83 per cent. of the total exports. In spite of the fact that the manufacturers of the country had an unusual demand upon them from the home markets during the past year by reason of the unusually small importations of manufactures, they have not only supplied the home market, but increased their exports over those of any preceding year, so that the totat exportations of manufactured goods in the year just ended reaches nearly $300,000,000, while in no year prior to the centennial did they reach as much as $100,000,000. A comparison of the exports of 1898 with those of 1888 shows an increase of practically 100 per cent. in that period, the total for 1888 being $695,954,507 against $1,231,311,868 in 1898. The extension of our export trade has been in all parts of the world, but especially with the distant points and with those countries and continents which but a decade ago purchased but little of our productions.

To Africa, which in 1888 bought but a little over $3,000,000 worth of our productions, we have, during the past year, sold $17,000,000 worth; to Japan, which took but little over $4,000,000 worth in 1888, our sales in the year just ended were valued at $21,000,000; to China, which took but $4,500,000 worth in 1888, we sold in 1898 $10,000,000 worth; to Austria-Hungary, which took less than $500,000 worth in 1888, our sales in 1898 were over $5,000,000 in value; Belgium, which took less than $10,000,000 worth in 1888, took $47,000,000; Denmark increased from $3,000,000 in 1888 to over $12,000,000 in 1898; Netherlands from $16,000,000 in 1888 to about $65,000,000 in 1898; France from less than $40,000,000 in 1888 to nearly $100,000,000 in 1898; Germany from $56,500,000 worth in 1888 to over $150,000,000 worth in 1898; British North America from $38,000,000 in 1888 to about $85,000,000 in 1898; and the United Kingdom from $362,000,000 in 1888 to about $540,000,000 in 1898.

BATTLESHIPS FOR RUSSIA.

The official gazette of Russia announces that the government is about to lay down three battleships of the Peresweit type—that is of 12,674 tons displacement and 17½ knots speed—in the Baltic, and two others similar to the Peresweit type are to be built by the Cramps, in Philadelphia. Besides these the Prince Potemkin and other of the Tri Sviatelia type—12,450 tons and 16 knots speed—have been laid down in the Black Sea. It is also proposed to build another of the Cissoi type—of 8,880 tons displacement and 16 knots speed.



NEW TONNAGE.

According to the official measurement sent out by the Bureau of Navigation the new steel steamer Presque Isle, built at Lorain and hailing from Marquette, is 4,578 tons gross and 3,570 tons net. The tow barge John Fritz, 4,693 tons gross and 4,447 tons net. The several other vessels assigned official numbers for the week ended July 16 were all small craft.

JUDGE MCDOUGALL, of Toronto has rendered judgment in favor of plaintiff in the case of the tug Fern, which was run down in Lake Erie while raising the wreck of the Grand Traverse, by the schooner Porter on her way from Buffalo to Detroit. Capt. Herminger of the Fern sued the Porter for $252 damages. The case was tried in Windsor.

CHICAGO SHIP AND DRAINAGE CANAL.

(ILLUSTRATED.)

By constructing an artificial waterway from Lake Michigan to Joliet, Chicago restores an ancient outlet to the Mississippi. For ages the waters of the lakes were poured into the Gulf of Mexico through this outlet by way of the Mississippi Valley and the trough hewn out of the rock for a distance of 20 miles, the bottom of which is only six feet above the present level of the lake, is from one to two miles in width. It may be said to begin at Summit, 11 miles west of Lake Michigan, and to the end at Lockport, 20 miles further west and south. It is in the bed of this natural outlet that a new channel is now being excavated of sufficient depth to renew the outflow from the lake.

A remnant of the ancient stream is found in the Desplaines river, which now, a mere thread, winds through the valley over its rocky bed. This river rises in the southern part of the State of Wisconsin and flows southward, parallel with the western shore of Lake Michigan, 12 to 40 miles distant. At Summit it turns abruptly to the southwestward and follows the valley to a point 60 miles below Chicago where it unites with the Kankakee to form the Illinois river. The Illinois river continues southwestward across the state emptying into the Mississippi at Grafton, 325 miles from Chicago.

The period of construction for the Illinois and Michigan canal dates back to July 4, 1836, and on April 23, 1848, the barge General Thornton, of LaSalle, passed through the entire length of the canal from LaSalle, and arrived at Chicago on that date. The route was used via the Illinois river to reach St. Louis, with more or less commercial success for many years though the water shoaling in the Illinois river eventually rendered the canal worthless, either for traffic or sewerage. The general government then took up the question and after repeated surveys improvements were carried on in a desultory way for several years.

In 1866, Col. J. O. Hudnutt, of Chicago, surveyed a canal route from Hennepin to Rock Island, which was adopted substantially for the present Hennepin canal. A later survey showed that the canal would be 64 miles in length and it could be supplied with water by a navigable feeder 38 miles in length from Rock river at Dixon.

The connection from Chicago to Rock Island on the Mississippi being accomplished, all efforts will be turned in the future to improving the Illinois river from Hennepin to Grafton and so that all vessels that can reach St. Louis may be able to proceed through to Chicago and thence enter the lake trade.

POSTING A SHIP AT LLOYD'S.

When a ship is overdue, an opportunity is sometimes afforded for a gamble at Lloyd's. It can be readily understood that underwriters who are interested in the "overdues" are only too willing to get rid of a risk by paying a premium on the insured rate to those who are willing, on their terms, to relieve them of their responsibilities. The premium varies with the chances of the vessel turning up; the smaller the chances, the higher the premium, and vice versa. The rates paying on "overdues" serve as accurate barometers of the probabilities, or otherwise, of the ship ever being heard of again. These underwriters who speculate on "overdues" are generally known by the significant names of "doctors." The insurance on an "overdue" may pass through many channels before the ship is, on the one hand, "posted" at Lloyd's as "missing," or, on the other hand, she arrives in safety.

A ship is never "posted" until the committee is thoroughly satisfied that her case is hopeless, and until the owner is of the same opinion. Before "posting" a notice is put up for a week inviting any information concerning the vessel. If this elicits no news the committee at its next meeting votes the ship as "missing," and a notice is "posted" accordingly. The loss is then settled and paid for. It may be incidentally remarked that "posting" at Lloyd's constitutes a legal death certificate for any one on board the missing ships.—Good Words.

THE forward section of the revenue cutter Algonquin has left Ogdensburg for Montreal in tow of the tugs Curle and Alert. The after section will remain until the pontoons return. The Gresham, which went down the river some time ago, has been put together, and is nearly ready to leave Montreal for the coast.

MARINE RECORD

ESTABLISHED 1878.

Published Every Thursday by

THE MARINE RECORD PUBLISHING CO.,

Incorporated.

GEO. L. SMITH, President.

C. E. RUSKIN, - - - - Manager.
CAPT. JOHN SWAINSON, - - - Editor.
THOS. WILLIAMS, Chicago, - - Associate.

CLEVELAND, Western Reserve Building.

CHICAGO. Royal Insurance Building.

SUBSCRIPTION.

One Copy, one year, postage paid, - - $2.00
One Copy, one year, to foreign countries, - - $3.00
Invariably in advance.

ADVERTISING.
Rates given on application.

All communications should be addressed to the Cleveland office.

THE MARINE RECORD PUBLISHING CO.,
Western Reserve Building, Cleveland, O.

Entered at Cleveland Postoffice as second-class mail matter.

CLEVELAND, O., JULY 28, 1898.

WAR INDEMNITY.

Without taking into consideration the loss of the Maine the amount which the United States has already spent on the war would wreck all the finances and private fortunes of Spain, even with the most liberal concessions of colonial territory, which that country could grant or the United States ask.

Germany levied a fine of $1,000,000,000 on France, besides annexing Alsace and Lorraine. The fine was made the heaviest known to modern times, in the hope that it would be too large for France to pay for many years, and in the meantime territory was to be occupied by the German armies. The money was promptly raised, and then Germany regretted the fine had not been made heavier.

Russia stipulated as the price of peace after the Russo-Turkish war that Turkey should pay $725,000,000, besides losing territory and making other concessions. Subsequently Russia agreed to take territory for a large part of the cash indemnity, and Turkey is still in arrears on the balance.

Japan mulcted China of $150,000,000, besides taking the island of Formosa and compelling China to submit to other humiliating conditions.

In 1866, at the end of the war between Prussia and Austria, the latter power was required to cede territory and pay $30,000,000 indemnity.

Greece was compelled, as a result of its recent war with Turkey, to pay Turkey $20,000,000 and submit to a "rectification of the frontier."

All these indemnities were ostensibly to pay the cost of the war, but fell for short of doing so. And so will the Spanish indemnity, although the figures will no doubt look very large when the sum is mentioned, as it ultimately will be.

WELLAND CANAL TOLLS.

The Oswego Board of Trade held a meeting on Monday, with the mayor as chairman, and after a discussion of the matters interesting the port of Oswego, in connection with the approaching settlement of existing differences between the United States and Canada, by the joint commission appointed for consideration and adjustment thereof, which is to convene in Quebec in August proximo, the President was directed, on motion of Mr. George T. Clark, to appoint a committee of five members to learn the course of procedure before the commission; communicate with the Hon Charles A. Chickering, M. C.; interest such other influence as may be desirable and helpful; secure such information and statistics as bear upon the questions in view, and prepare the arguments and data in favor of the claim for abrogation of tolls in the Welland canal, for presentation before the joint commission; and with power to take such action in behalf of this Board as shal be deemed most effective.

President Downey named as the committee, the Hon. John D. Higgins, the Hon. John T. Mott, Charles H. Bond, George T. Clark, John C. Churchill, Jr.

MAKING A SAFE PORT.

It is now becoming more generally known that if citizens desire to improve a harbor so that it may be a safe port, that is not to have groundings and similar delays, then their municipality must take proper measures and not expect the United States government to improve local waterways. In this connection Waukegan is dropping into line and the city authorities are moving for the further improvement of the harbor at the city's expense. The Mayor has signed the ordinance passed by the Council calling for bids for dredging a ship channel in the harbor to be completed May next. It is to be eighteen and one-half feet deep and sixty feet wide except in front of the city dock, where it will be 120 feet wide. The stimated cost approaches $5,000. The digging of this channel will place the harbor on a par with other minor ports, thereby making a direct bid for future commerce; but it is safe to say that an outlay of $50,000 instead of $5,000 would prove to be an excellent investment for the port of Waukegan.

LAKE SUPERIOR COAL SHIPMENTS.

Notwithstanding the 20 cent rate on coal to Lake Superior is still maintained, there is a brisk trade beino carried on. A Duluth paper says: At all of the docks in the Duluth-Superior harbor may be found from three to seven boats engaged in discharging cargoes or waiting for an opportunity to do so. The activity has continued all of this month, and seems to indicate a desire on the part of shippers to get their commodity forward in as large a quantity as possible before the latter holf of the season. The receipts of coal at the Duluth-Superior docks to the present date are much in excess of the amount that had been received to Aug. 1 last year. The estimated receipts thus far are 1,050,000 tons, which is over 300,000 tons more than had been received last season at a date 10 days later than now. The receipts of bituminous coal to Aug. 1 last year amounted to 53,077 tons. This year they are already 70,000 tons. The estimated receipts of anthracite coal to date are 300,000 tons, which is about 100,000 tons greater than they were a year ago on Aug. 1.

The delay in getting coal shipments forward last year was in large measure due to the coal strikes, which were long continued. The coal shippers are said to bear in mind the fancy freight they were compelled to pay last fall to get coal to Duluth, and are anxious to get as much as possible forward now while the rate is low and vessel tonnage plentiful, for fear of "accidents." The coal rate seems to have settled into a rut at 20 cents, so far as transportation from Duluth to Lake Erie is concerned. This rate, in connection with a 4-cent ore rate for return cargoes, affords pretty lean picking for the smaller vessels. There was more complaint when the ore rate touched the 55-cent mark a year ago than there is now. It is said that the owners of small class of tonnage have decided that they must face the inevitable, and will do so with as good grace as possible.

The outlook is that the stocks of coal to be delivered at Duluth and Superior this summer and fall will be larger than ever before in any one season. There is every prospect that there will be a demand for an unusually large amount of coal. The large crop in prospect in the Northwest will make quite a difference in the demand for railroad coal, and if the prices for wheat are fair there will be a better general demand in the tributary country, for there will be money available for the purchase of coal.

LAUNCH OF THE STEEL STEAMER TROY.

The steel steamer Troy, built at the Wyandotte yards of the Detroit Dry Dock Co., to the order of the Western Trans. Co., was successfully launched on Wednesday last, July 20, in the presence of about 5,000 spectators.

The Troy is the largest package freight (general cargo) steamer ever built on the lakes her; principal dimensions as furnished the Record some time ago, are 420 feet over all, 400 feet keel, 46 feet beam and 28 feet molded depth, with quadruple expansion engines and three boilers, all built at the works controlled by the Detroit Dry Dock Co. It is estimated that she will carry 5,250 net tons, exclusive of her fuel, on a draft of 17 feet and at a speed of 13 miles an hour.

For the convenience of handling package freight she has been fitted with seven gangways on each side, all placed above the 16-foot loading mark. Her hatchways are spaced at 24 feet centers. It is expected that she will be ready for service towards the end of August. There was an absence of the christening ceremony at the launch, though everything else went off smoothly. The cost of the Troy is estimated at from $225,000 to $250,000.

LAKE FREIGHTS.

Grain freights, which advanced ⅛ cent on corn last week, have gone up another notch and easy chartering at 1 cent is the going quotation; 1⅛ cents on wheat, ⅞ cent on oats, Port Huron or Buffalo. Wheat has been carried for some time past on the corn rate, but the advance had to come and the graded rate is again in order. Corn to Kingston, 1⅞ cents.

An improvement is also noted this week in coal charters. Buffalo to Chicago is up to 30 cents, and 25 cents to Duluth; Ohio ports to Lakes Michigan or Superior, 25 cents and 20 cents respectively, with but little signs of an advance on the latter quotation, as a number of iron ore carriers are taking coal up, but 25 cents was paid on a cargo to Jack Fish Bay, which is an advance of 5 cents.

The demand for ore tonnage is light but there has been slightly better dispatch at former rates, 40 cents and 45 cents, Escanaba and Duluth respectively, but there is no present likelihood of an advance in freights unless the brisk grain chartering should draw such a quantity of tonnage off Lake Superior as to give a 5 cent boost in that direction, which is a probability to guess at.

LAKE SUPERIOR HARBORS.

The annual report of Maj. Sears, Corps of Engineers, U. S. A., in charge of river and harbor work on Lake Superior, at Ashland harbor, says that the present length of the breakwater is 7,363 feet, giving a protected area of some 1,600 acres and affording a safe anchorage and dockage for three miles along the city front. The breakwater will continue to afford this protection as long as it is kept in repair, but this is very expensive. During the year dredging work has been continued with the result of securing a channel of an average width of 124 to 150 feet and a navigable depth of 20 feet from Ellis avenue to a point opposite Eleventh avenue west. Maj. Sears says that at an early day the breakwater should be extended towards the shore to protect the commercial interests, which are increasing in the easterly part of the town.

At Duluth and Superior Bay the year has been largely spent in preliminary work on project for the 20-foot channel throughout the entire harbor, approved in the river and harbor bill of 1896. Maj. Sears says the improvement made under the old project is in excellent condition and the expenditure thereon has been amply justified by the immense commerce which it has readily accommodated. Title to nearly all the land required to carry out the new project has been secured by gift and purchase, and dredging and construction of cribwork and substructure of various piers caried on. In laying out the dredging work the policy has been first to widen and deepen the channels most in use. Satisfactory progress in all branches of the work is reported.

A LARGE ORE-HANDLING PLANT.

Among the improvements recently undertaken at the Lorain Steel Company's plant at Lorain, O., none will be more extensive than the ore handling equipment. By reason of the fact that the land of the Lorain Steel Company is fully forty-eight feet above Black River, very little crib work will be necessary to provide satisfactory dock facilities. The dock space will aggregate 900 feet, enabling the discharging of two of the largest lake steamers at the same time. That part of the Lorain plant in which vessel owners are interested will be otherwise looked after by the expenditure of an appropriation by the city of Lorain for dredging a depth of twenty feet to the company's docks, and by widening the channel to 450 feet at a point above the docks, in order that the longest boats may turn. The dock will be equipped with eight hoisting and conveying machines of the latest type, the distance from the center of the hatches of a boat unloading to the end of the hoisting bridge being 440 feet. The level of the ore yard is forty-eight feet above the datum, which is one foot above deep water level. The overhang of the hoisting bridge on the water side is 126 feet from the center of the pier at the top of the bluff. The storage room is ample for all the ore that can be used between December 1st and the opening of navigation, and the track system planned for the ore yards is designed to secure the rapid delivery of ore at the bins.

LAKE ERIE HARBOR WORK.

Cleveland—At the close of the last fiscal year a contract was executed for repairing the west breakwater at an estimated cost of $413,843.70. Work was commenced and continued through the fiscal year except when suspended because of the winter weather. The repair of the west breakwater thus far is progressing rapidly. Work was commenced under this contract June 17, 1898, and at the end of the month the amount of stone delivered was 4,067,-633 tons. Proposals were opened June 23 and the contract has been awarded for constructing part of the west pier, dredging and completing the east breakwater.

A part of the breakwater crosses the point of a shoal at or near the prolongation of Erie street, where the city for many years had its dumping grounds for material dredged from the river channel. It will be necessary to dredge a cut through the point of the shoal in order to obtain a base upon which to place foundation.

In the last annual report reference was made to conditions upon which the project for widening the mouth of the Cuyahoga river was adopted. It has recently been found, however, that insofar as they relate to the action of the Pennsylvania Railroad Co., they were not correct."

A large part of the outer harbor of Cleveland will ultimately require deeper water and a very large amount of dredging is now needed. The conditions are detailed describing the drift fill from the lake and solid sewer matter in suspension in the harbor, where a setting basin a formed, a vast amount of material having been dumped upon the shore and even within the limits of the harbor itself. The officer in charge of improvements has no means of enforcing the law save by information to the United States attorney. The dredging is much needed, but the fund appropriated for the improvement of the harbor, as now provided by law cannot be expended for dredging areas except as provided in the project for widening the river. The balance available July is $680,-851.80.

At Fairport it is confidently believed that the construction of breakwaters will entirely prevent the formation of bars by the action of winds and waves which are complained of. The breakwater will also greatly facilitate the entrance of vessels. It is very desirable that the breakwaters should be pushed forward as rapidly as possible. Balance available for continuing work $27,719.25.

Ashtabula Harbor—The effect of the new breakwater, both upon the bar and upon the seas in westerly winds, is already apparent and beneficial. Work has progressed during the fiscal year just closed, $52,472.42 having been profitably expended. Balance available $773.95. Freight tonage is reported as very large, exceeding 4,000,000 in 1897.

Conneaut—At the beginning of the fiscal year work was in progress on constructing the west breakwater in two cribs. For strength and class of workmanship, after inspection, the section of this breakwater has no superior in construction among all previously built upon the lakes. The entire cost was $29,133.81. The freight tonnage of Conneaut Harbor has increased to 589,368 tons in 1897, the annual increase exceeding 100,000 tons. Amount expended during fiscal year $37,497.99; balance unexpended $986.39.

Toledo—The contract for dredging was completed June 11, last, resulting in widening the channel to 300 feet, completing the southerly channel 1,600 feet—depths made to 20 feet. It is estimated that the improvements under the authorized survey, which has been made for deepening and straightening the channel in Maumee bay, with a view of securing a channel of a uniform width of 400 feet, 20 feet deep at low water, will be $1,095,000, provided work is done by the United States plant. The commerce of Toledo is increasing. For continuing the work $9,873.74 is available.

Port Clinton—The unexpended balance of the appropriation for this project to July 1, 1898, is $7,715.13, nearly half of which is due for liabilities incurred previously. There is now a good channel 100 feet wide and 10 feet deep between the piers, and 200 feet wide,with the same depth, inside. The time of completion of this contract was extended to July 31 inst.

Sandusky—The project is essentially an extension of the words included in the project previously approved. The officer in charge recommends the adoption of plans already submitted and the completion of work at an early day. Only $350 was available at the end of June, and a large appropriation is immediately necessary for the continuation of the work.

Huron harbor—The great development of commerce has increased the size of vessels and depths through canals and rivers between the lakes have encouraged the construction of vessels capable of drawing eighteen or twenty feet of water. In attempting to keep pace with these depths in harbor channels the older parts of many piers have been undermined. This applies not only to the piers of Huron but to all other piers upon Lake Erie, where harbor improvements have been made by parallel piers at the mouths of rivers. A small balance at the beginning of the fiscal year remained for the improvement. Large steamers found difficulty in reaching the wharves. The present project contemplates extending the west pier a distance of 600 feet and the east pier 568 feet. The appropriation was exhausted July 1.

Vermillion harbor—An examination of the channel and piers was made in June. An appropriation is recommended for strengthening the outer end of the pier upon which the lighthouse stands. No present available funds.

Black River (Lorain harbor)—An estimate of the cost of improving this was submitted with a view to providing better access to said harbor and the safety of boats therein. The estimated cost of works recommended was $695,-500. The freight tonnage of Lorain harbor is increasing rapidly and from present indications it will be doubled within the next two years. This harbor is in the collection district of Cuyahoga county, O. No funds on hand for continued improvement.

NOT TO OBSTRUCT.

The United States District Court at Marquette, Mich., has just rendered a decision of considerable interest to vessel and tug men of the lakes.

On May 5, 1897, the schooner James Mowatt was being towed through the Portage Lake Canal by the tug Valerie, of Houghton. At the time the dredge Superior, owned by Capt. S. S. Barker, of Superior, was engaged in excavating the channel and was occupying so large a part of the channel that the tug and the tow were unable to pass. The tug, without waiting for the dredge to move to one side, attempted to pass through the narrow opening, with the result that the schooner collided with the dredge, doing considerable damage to it and sustaining some damage herself. The owner of the dredge libeled the schooner at Marquette for the damages sustained. The court absolved the schooner from all fault, holding that while the dredge might rightfully occupy a navigable channel while employed in its work, yet it must use diligence in giving vessels an opportunity to pass. The case was argued by Searle & Spencer, of Duluth, on behalf of the schooner, and by H. H. Grace and Chadbourne & Reese on behalf of the tug and dredge.

This is said to be the first time that a decision has been obtained that defines the rights of vessels over dredges in navigable waters.

IMPROVING CHICAGO RIVER.

The movement for the improvement of the Chicago river, as announced in our issue of the 21st, to open it for the largest class of vessels, took a very practical turn at ag eneral conference of the River Improvement Association, railway officials and the sanitary district trustees. General Manager W. C. Brown, of the Chicago. Burlington& Quincy railroad, announced in so many words that the elevator burned in May would not be rebuilt on the Chicago river, unless the company had the assurance that vessels of the largest class would be able to reach it. The company was now ready to go ahead with reconstruction, but it did not think wise to increase its investments on the river unless fullest facilities could be found there. He stated that Chicago was not the only gateway of the Burlington, and his road to meet competition of St. Louis and Gulf points would be compelled to go where grain could be carried the cheapest. Five dollars a car was now sufficient to turn grain from the lakes to the Gulf. As an evidence of the Burlington's sincerity in the improvement of the river, Mr. Brown said the company, where it owned land on both sides would give all the property required to widen the channel. Where it owned land on only one side it would give land equal to that donated by the owner on the other side. He also produced a chart showing that the company, in case it built a new elevator in the vicinity of Twenty-second Street would make a winding place there for vessels of the largest size. In a general discussion which followed this statement, satisfactory progress was made toward widening the South branch at four of the most objectionable points. At two of these points it is proposed to substitute bascule for center pier bridges. The drainage trustees stated that they would go to the limit in their expenditures for the improvement of the river for purposes of navigation, in securing capacity for the required flow of water. After two hours deliberation and discussion the meeting adjourned and the drainage trustees will now take up, with the Northern Pacific, the project for widening the river at Taylor street.

LARGE CARRIERS.

The Marquette Journal in an article on ore carrying records out of that port treats of the 6,031 gross tons shipped last week on the Presque Isle in four hours' time mean draft 17 feet 10 inches. The steamer Yale had previously loaded 4,290 tons and the tow barge Polynesia 5,015 gross tons at a later date but the first cargo carried by the Presque Isle is the banner load. The Journal goes on to say that thirty or forty years, and not so long ago as that, when iron mining was not conducted on the collossal scale it is now, ore was carried out onto the docks with tram cars, dumped there and later taken aboard small schooners with wheelbarrows. In those days a boat which carried a few hundred tons was a good boat.

The boats in the trade kept gradually increasing in size and some years later when the E. B. Hale came out with a carrying capacity of 800 tons it was considered a monstrous big vessel. The day it came into Marquette on its maiden trip the entire town knocked off work and went down to see the wonderful craft.

The size has been gradually increasing ever since, and each year has seen bigger boats come into the trade. It would seem that in the Presque Isle the limit of size had been nearly reached, but if the freight rates keep dropping down as they have the past few years only boats of the Presque Isle's class can make any money for their owners.

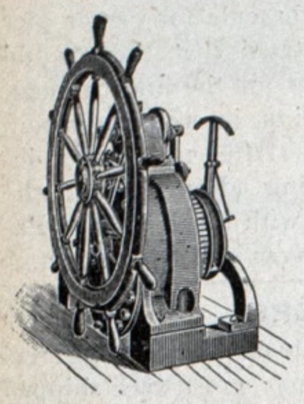
Capt. James B. Lowe who has charge of the new boat as well as his chief engineer Thomas Kelly are men who have watched the growth of the trade on Lake Superior and fully realize what the 6,000 ton cargo means in the fight for the survival of the fittest. The large boat of five years ago is fast becoming the pigmy of to-day when the 8,000 ton mark has nearly been reached.

VESSELS CLASSED.

Vessels classed or rated by the American Shipmasters' Association in the 'Rec'ord of American and Foreign Shipping:" American screw steamer, S. Pizzati, owned by S. Oteri, of New Orleans; American ship, Yosemite; American half brig (aux. screw), Lucy W. Snow, and British bark, Unanima. The following steam and sailing vessels are now in course of construction under the inspection and survey of the American Shipmasters' Association for the highest rating and classification in the "Record of American and Foreign Shipping:" One steel twin-screw steamship, 360 ft. long, 50 ft. beam and 30 ft. 3 in deep, building at Messrs. Wm. Cramp & Sons, Philadelphia, Pa., for the New York & Cuba Mail S. S. Co. Also four steel twin-screw ships, each 280 ft. long, 36 ft. beam and 25 ft. deep, for the American Mail Steamship Co. Two steel screw steamers, each 360 ft. long, 50 ft. beam and 30 ft. 3 in. deep, for the Old Dominion Steamship Co., building at the Delaware River Iron Ship Building Works, Chester, Pa. One steel screw steamship, 274 ft. long, 42 ft. beam and 26 ft. deep, for the Merchant & Miners' Transportation Co., of Baltimore, building at the Harlan & Hollingsworth Co., Wilmington, Del. Also at this works, one screw steel tug for the Philadelphia & Reading R. R. Co., 157 ft. long, 29 ft. beam and 18 ft. deep. This vessel is to be called the Valley Forge. One steel four-masted ship, 310 ft. long, 45 ft. beam and 22 ft. 8 in. deep, at the yards of Messrs. Samuel & William Sewall, Bath, Me., for Messrs. Arthur Sewall & Co. This ship is to be called the Erskin M. Phelps and will carry 5,000 tons dead weight in a single cargo; she has steel masts and yards throughout and for excellence will not be surpassed by any vessel in the world.

The following story is now going the rounds: There was a pious man in the crew of an ironclad. He had been told one evening that in all probability the next day would witness a great battle. When he prayed that night he put special stress upon the plea that the vessel upon which himself and his comrades were serving might escape disaster, saying among other things: "O Lord, shield us from the shells and other projectiles of the enemy, but if any shells and solid shot do come to our vessel, I pray Thee that they may be distributed as prize money is distributed, mostly among the officers."

QUEEN CITY HYDRAULIC STEERER



The Best and Most Powerful Steerer for Tugs, Steamers, Etc.

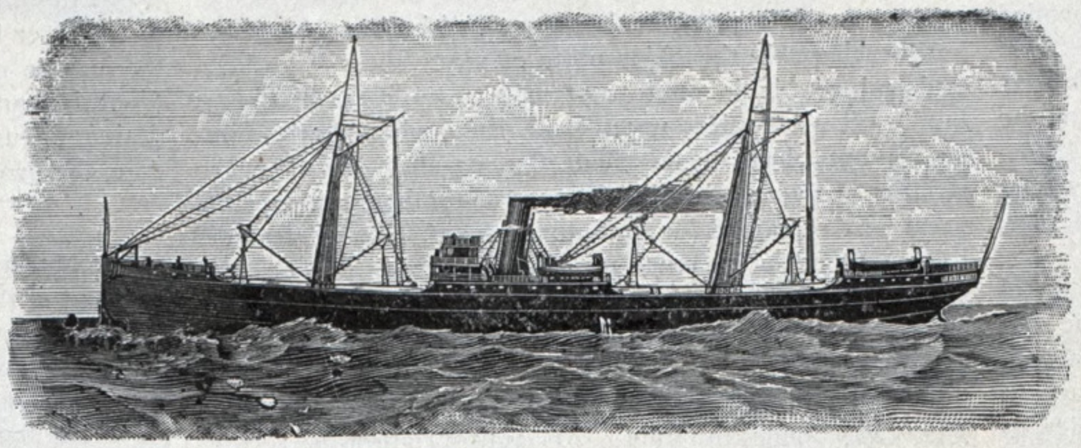
MANUFACTURED ...BY...

Queen City Engineering Co.

BUFFALO, N. Y.

....Write for Prices and References....

F. W. WHEELER & COMPANY,



BUILDERS OF ALL KINDS OF

Iron, Steel, and Wooden Ships

FOR LAKE OR OCEAN SERVICE.

West Bay City, Mich.

F. W. WHEELER, Pres. H. T. WICKES, V. P.
J. S. PORTER, Treas. C. W. STIVER, Sec'y.

FRONTIER IRON WORKS, Detroit Mich.

MARINE ENGINES.

WM. WILFORD'S

Matchless Waterproof Cloth ...and Societe Anonyme De Veluwe, (Japan Paint).

EDWARD A. BUNKER, Sole Agent,

20 BROAD STREET. ...NEW YORK CITY.

W. A. McGILLIS & Co.

DREDGING.

57 WADE BUILDING. CLEVELAND, OHIO.

SEAMEN'S DUTY TO PASSENGERS.

Since the terrible fate that befell the passengers of La Bourgogne much speculation has arisen as to the liability of the French crew under the charges brought against them in connection with the sinking of the ship. It is well settled that the law in England and the United States is adverse to the crew.

The leading American case says the Philadelphia Telegraph is that of the people against Holmes, which was tried in this city by the brilliant lawyer David Paul Brown as prosecuting attorney. The story is an interesting one. The ship William Brown sank off Nova Scotia in March, 1841. The passengers and crew overloaded the boats. After drifting for several days a storm came up, making it evident that the overloaded boat which Holmes commanded would be swamped and all lost. Under the e circumstances he gave the order to lighten the boat. Twelve passengers were thrown overboard and two sisters voluntarily jumped into the sea. The remainder of the passengers in the boat and the crew were saved and brought to Philadelphia. Holmes was indicted and tried. In his defense the above circumstances were shown and additional evidence admitted that Holmes was one of the most active in saving the passengers and getting them into the boats; that at the risk of his life he had personally saved several. Nevertheless Holmes was convicted, and the United States court sustained the conviction, on the ground that the contract of the sailer bound him to use every means in his power, even to the sacrifice of his own life, to deliver each passenger at the port for which he shipped.

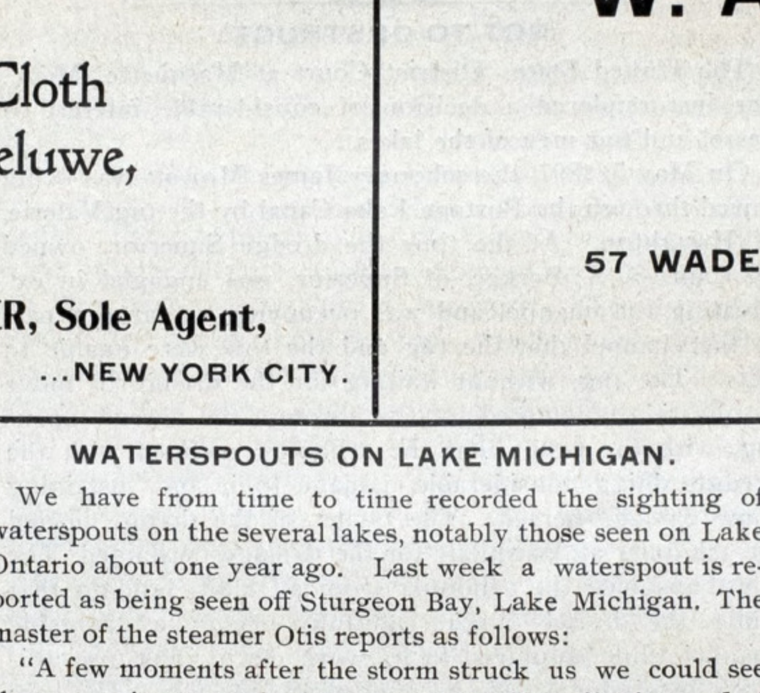
The point of jurisdiction was raised, when it was held that the flag converted the ship and her apparel, including the boats, into national territory. As to acts done in the waters of the high seas, it was further held that the contract controlled as to the sailors. The court also held that as to the same acts done between passengers on the high seas a different rule prevailed; in the absence of international law as to when they owed no duty to one another; they were, from the moment of leaving the ship, remitted to their natural rights, and the law of self-preservation prevailed.

Much sympathy throughout the country was manifested for Holmes in this case from its purely doctrinal law, and, its being a case of first impression, his sentence was commuted to imprisonment. After 18 months he was released, but the principle that the sailor owed a duty to passengers, even to the sacrifice of his own life, was established.

WATERSPOUTS ON LAKE MICHIGAN.

We have from time to time recorded the sighting of waterspouts on the several lakes, notably those seen on Lake Ontario about one year ago. Last week a waterspout is reported as being seen off Sturgeon Bay, Lake Michigan. The master of the steamer Otis reports as follows:

"A few moments after the storm struck us we could see the water rise upward, about a quarter of a mile leeward of us, in a whirling column until it was at least 100 feet high. It was funnel shaped and must have been 30 feet wide at the bottom, the top tapering and hanging over to one side. Above were angry looking clouds, through which the lightning darted.



Usual Form of Waterspout.

"It was a strange sight, and I tell you we were glad we were not any nearer to it. The waterspout lasted about twenty-five minutes, when the water gradually subsided. The storm was a furious one for a while, but we rode through it successfully.

THE DUTY OF CARRIERS.

In answer to references from the Commissioner of Internal Revenue, all bearing upon the question as to whether the shipper or carrier shall pay for and affix the required revenue stamps to bills of lading, etc., Assistant Attorney-General Boyd has held as follows:

The law makes it the duty of every railroad, steamboat company, carrier, express company or corporation, or person whose occupation it is to act as such, to issue to the shipper, consignor or his agent or person from whom any goods are excepted for transportation a bill of lading, manifest or some other evidence of the receipt of goods, wares or merchandise received for carriage or transportation, and this bill of lading, manifest or memorandum requires a revenue stamp of the value of 1c affixed to it and canceled. In case of failure to issue such bill of lading the law imposes a penalty of $50 upon the carrier guilty of such failure.

The penalty for failure to affix the stamp is not more than $100. The purpose of the law is clear. It was to tax the carrier and not the shipper; and these provisions undoubtedly fix upon the express companies and other carriers the duty providing, affixing and canceling the stamp, and their failure to so provide, affix and cancel such stamps subjects them to the penalties provided by law. It is suggested that some of these carriers are refusing to receive goods for shipment until the shipper pays the tax. While it is not my province to advise as to the recourse which the shipper may have in instances of this kind, yet I am sure that the laws are ample to require public carriers and express companies to receive goods tendered for shipment or suffer damages for such refusal.

A LARGE DREDGE DIPPER.

The Boston Forge Company, of East Boston, has just finished for one of the tug dredges of George H. Breyman & Bros., the largest dipper ever manufactured in New England. The dipper is in weight 26,770 pounds. The Boston Post says the capacity of this enormous dipper at one dip is 7½ yards. George H. Breyman & Bros., of Toledo, for whom the dipper was made, have a large contract from the U. S. government in the Boston harbor and employ two big dredges and a fleet of tugs and scows. While the dippers now on the dredges lift 9 yards of dredging, the one made in Boston is for digging hard-pan.

A new steamer 100 feet over all, 17 feet beam and 7½ feet draft, to run in the fruit trade between Saugatuck and Milwaukee, was launched by R. C. Brittain, her builder, at the former port on Tuesday.

TO MINE AND MANUFACTURE.

The strength of Illinois steel stock and Minnesota iron stock has revived the rumor of consolidation of the two companies. Their business relations are close, and it is surmised that the controlling interests of both companies have agreed to bring about a merging of the two corporations as soon as the consent of the other shares can be obtained.

The interests represented in the two companies held a conference in New York a few days ago, to complete, as far as possible, negotiations in the deal now pending. One of the matters discussed is understood to have been the purchase of the Elgin, Joliet & Eastern railroad. Other details of the plans looking to closer relations between the two properties were gone over. It was impossible to ascertain its actual result, but it was said that much progress toward completing the deal was made.

It is supposed that the purpose of the plan is to place the Illinois Steel Co. in a position to compete with Carnegie, the Thomases, the Youngstown Steel Co., and other furnace men who mine their own ore. In other words, the desire is to cheapen the finished cost by removing the element of the mining middleman, and thus wipe out the necessity of providing a margin between deposit and furnace.

SPLICING THE MAIN BRACE.

A notable event was the invention of grog in 1740. According to a learned article on the subject published in the United States service by Admiral Meade in 1884, the honor is due to Admiral Vernon of the royal navy. In bad weather it was his fashion to wear on deck a grogrom cloak, from which he acquired among the men the sobriquet of "Old Grog." About the year mentioned, while in command of the West India station, he originated a new and satisfactory official beverage composed of rum and water, the serving of which began on his flagship, the Burford, and thence spread. The beverage was dubbed "grog," and the word has lived.

When our navy began its illustrious career amid the revolution, liquor was, of course, as necessary a part of the supplies as sea biscuit and powder, and we find Paul Jones, on sailing from Portsmouth in 1777, bewailing, among other shortages, "only 30 gallons of rum."

In 1831 Congress took an advanced step by providing that all in the navy that voluntarily relinquished the spirit ration would be paid 6 cents a day. In 1842 the ration was cut to one gill, but the alternative of half a pint of wine was added, and the commutation price was fixed at 3 cents.

The first year of the civil war brought a greatly increased naval force and increased trouble from strong drink. Moral sentiment had progressed, too. In July, 1862, Congress revolutionized the American navy by passing the historic law providing:

"That from and after the first day of September, 1862, the spirit ration in the navy of the United States shall forever cease, and thereafter no distilled spirituous liquors shall be admitted on board vessels of war except as medical stores, and upon the order and under the contiol of medical officers of such vessels, and to be used only for medical purposes. From and after the first day of September next there shall be allowed and paid to each person in the navy now entitled to the spirit ration 5 cents per day in commutation and lieu thereof, which shall be in addition to the present pay."

And since that day there has been no grog in the United States navy.

VISIBLE SUPPLY OF GRAIN

As compiled for The Marine Record, by George F. Stone, Secretary Chicago Board of Trade.

Cities Where Stored.	Wheat. Bushels.	Corn. Bushels.	Oats. Bushels.	Rye. Bushels.	Barley Bushels.
Buffalo	299,000	579,000	553,000	12,000	127,000
Chicago	315,000	7,802,000	559,000	81,000	10,000
Detroit	53,000	87,000	.....	10,000	.....
Duluth and Superior	1,525,000	2,315,000	30,000	9,000	40,000
Milwaukee	81,000	.....	.....	3,000	8,000
Montreal	80,000	69,000	912,000	17,000	28,000
Oswego	.....	43,000	.....	.....	.....
Toledo	170,000	454,000	50,000	15,000	.....
Toronto	16,000	.....	12,000	.....	.....
On Canal	75,000	1,058,000	825,000	83,000	113,000
Grand Total	9,382,000	18,671,000	4,270,000	484,000	350,000
Corresponding Date, 1897	16,032,000	16,179,000	6,651,000	1,771,000	954,000
Increase	.....	.....	.....	24,000	.....
Decrease	1,079,000	1,316,000	1,302,000	.....	35,000

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

COMMERCE OF CUYAHOGA DISTRICT.

During the month of June ports in Cuyahoga district received 1,264,671 tons of ore. Compared with 1,219,302 for the same months in 1897. Cleveland again leads with 149,308 tons, which is a big gain over last June. Ashtabula is a close second and shows a big falling off compared with 1897. Receipts at Conneaut are far ahead of last year. Receipts of ore at the different ports in the district follow:

Cleveland	449,308
Ashtabula	444,972
Fairport	134,837
Lorain	62,431
Conneaut	173,123
	1,264,671

More than half the coal was sent forward from Cleveland. Shipments from the different ports follow:

Cleveland	188,880
Ashtabula	73,313
Fairport	21,354
Lorain	4,534
Conneaut	6,671
	294,752

Although Cleveland shows a gain in shipments of coal for the month compared with last year, the total shipments for the district are not up to last year. Shipments last month for the district were 294,752 against 317,378 tons in 1897.

THE Holland-American line has contracted for two new twin-screw steamships of 12,000 tons register, to be ready by 1900. With two vessels now building and with one recently put into service, the line will have five twin-screw steel vessels. The vessel nearest completion is the Statendam which is due to sail on August 25 from Europe. She is 525 feet long, 60 feet beam and of 10,500 tons register. The new vessels are to be 550 feet long, 62 feet beam, 44 feet deep and 12,000 tons register. The Ryndam, to be finished next year, is of the same dimensions. The vessels' speed will not exceed 18 knots each. Of the two new ones, Harland & Wolf, of Belfast, Ireland, are building one, and Blohm & Voss, of Hamburg, the other. The Ryndam and Statendam were built by the Belfast firm.

TOBIN BRONZE

(Trade-Mark Registered.)

Tensile strength of plates one-quarter inch thick, upward of 78,000 lbs. per square inch. Torsional strength equal to the best machinery steel. Non-corrosive in sea water. Can be forged at cherry red heat. Round, Square and Hexagon Bars for Bolt Forgings, Pump Piston Rods, Yacht Shaftings, etc. Rolled Sheets and Plates for Pump Linings and Condenser Tube Sheets, Centerboards, Fin Keels and Rudders.

The Ansonia Brass & Copper Co.

SOLE MANUFACTURERS,

Send for Pamphlet. 19-21 Cliff St., NEW YORK.

INCORPORATED 1794.

Insurance Company of North America

CAPITAL, Paid up in Cash, - - - - $3,000,000.00
ASSETS, - - - - - - - 10,023,220.93

CHARLES PLATT, President. EUGENE L. ELLISON, Vice President.
GREVILLE E. FRYER, Sec'y and Treas. JOHN H. ATWOOD, Assistant Secretary.
T. HOUARD WRIGHT, Marine Secretary.

Lake Marine Department, GEORGE L. McCURDY. MANAGER. CHICAGO, ILL.

MARINE AND INLAND INSURANCE.

Atlantic Mutual Insurance Co.

Organized 1842. Office 51 Wall Street, NEW YORK

Insures against Marine and Inland Transportation Risks and issues policies making Loss Payable in England.

Assets over $10,000,000 for the Security of its policies.

The profits of the Company revert to the assured, and are divided annually upon the premiums terminated during the year; thereby reducing the cost of insurance. For such dividends, certificates are issued bearing interest untill ordered to be redeemed, in accordance with the charter.

A. A. RAVEN, Pres. F. A. PARSONS, V. P. CORNELIUS ELDERT, 2d V. P.
THEO. P. JOHNSON, 3d V. P. J. H. CHAPMAN, Sec'y.

Pintsch Gas Lighted Buoys.

Adopted by the English, German, French, Russian, Italian, and United States Light-House Departments for channel and harbor lighting. Over 800 gas buoys and gas beacons in service.

Burn Continuously

from 80 to 365 days and nights without attention, and can be seen a distance of six miles.

Controlled by

THE SAFETY CAR HEATING AND LIGHTING CO.

160 Broadway, New York City.

NEW YORK. BALTIMORE.
PHILADELPHIA. SAN FRANCISCO.
BOSTON. NEW ORLEANS.

Johnson & Higgins,

Average Adjusters,
And
Fire and Marine Insurance.

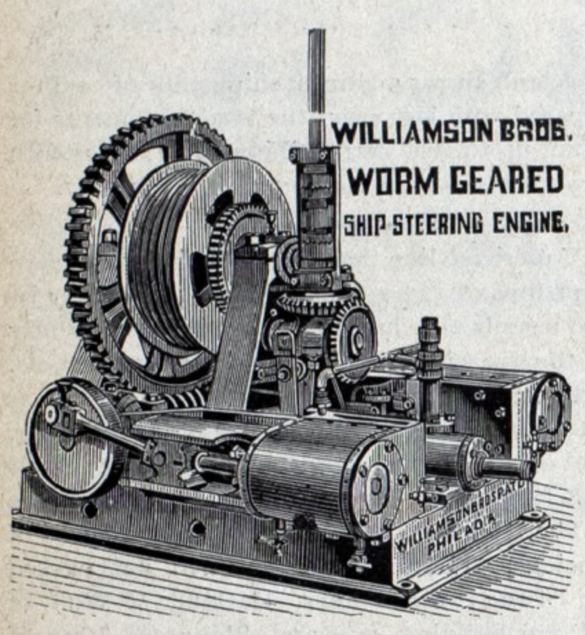
Special Facilities for Placing Marine Lines.

Guaranty Bldg., BUFFALO, N. Y.

For Stationary, Portable, Traction Engines, Tugboats, &c.
Thoroughly Reliable—Perfectly Automatic.
JENKINS BROS., - Selling Agents,
NEW YORK, BOSTON, PHILA., CHICAGO.

WILLIAMSON BROS.,

COR. RICHMOND AND YORK STS.,
Philadelphia, Pa.



HOISTING and SHIP ENGINES
STEERING ENGINES.

With either Fractional, Spur or Worm Gear of Various Patterns to Suit all Purposes.

W. Buschman & Co.

Boat Supplies,
Furniture and Carpets.

214-216 Superior Street, - - CLEVELAND, O.

Telephone, Main 1016.

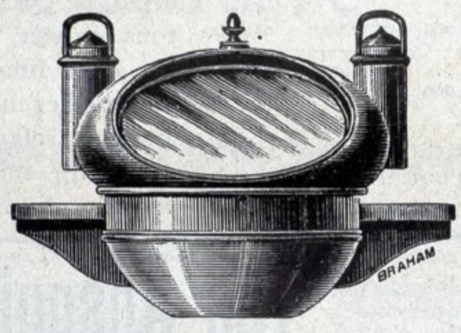
The American Navy,

What it consists of, what vessels go to make it up, what they are, first-class or second-class battleships, their strength, size and appearance, are now all live questions.

A Rare Opportunity

To learn all about these is offered by the new and elegant portfolio series just now being published, and furnished at a trifling cost. The MARINE RECORD has secured these portfolios for the benefit and interest of its readers, and it feels confident that nothing could be offered so well calculated to give the fullest possible information, and to afford such clear ideas of the exact appearance of **Our Fighting Squadrons.** The series we offer consists of ten handsome portfolios, each with sixteen superb photographic reproductions of all our important battleships. One entire portfolio is devoted to the destroyed Maine. There are also chapters and views of **Cuba,** her people, and of **The Hawaiian Islands,** all being accompanied by complete descriptive text and introductory chapters, full of general information. Each separate portfolio sixteen rare reproductions, **15 cents.** Whole series of ten containing one hundred and sixty views, **$1.50.**

THE MARINE RECORD PUB. CO. Cleveland, O.



FRANK MORRISON,

Compass Adjuster

and manufacturer of

Nautical Instruments

Compasses, Barometers, Patent Logs, Binnacles, Steam Gauges, Marine Glasses, Engine Indicators.

All Nautical Instruments Carefully Repaired.

OFFICE WITH UPSON, WALTON & CO., 161 RIVER ST., CLEVELAND, O.

Paddle Wheel Machinery

Our knowledge of river navigation is earned through long experience and exceptional opportunity. We design and build the *entire and complete* outfits of driving machinery for powerful light draft vessels, having the best of modern shop facilities to aid us in doing *all* the work. Write to us before you act.

MARINE IRON WORKS
Station A. CHICAGO.

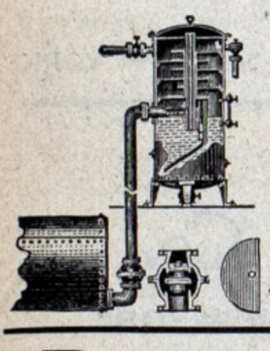
Maurice & Williams,

COMPASS ADJUSTERS,
AND NAUTICAL EXPERTS.

ROOM 13,
240 SOUTH WATER STREET.
CHICAGO.
'PHONE, 273 MAIN.

Compasses adjusted for deviation and deviation tables supplied. Great facilities for doing the work by day or night, in an hour or two.

Instruction given in Navigation and Nautical Astronomy. Correct magnetic courses furnished for all parts of the lakes. Repairing of nautical instruments attended to.



Buffalo Feed Water Heater

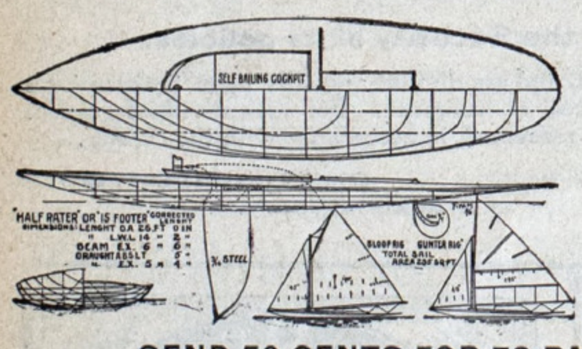
AND PURIFIER.

Made in all Sizes and to Suit all Conditions.

ROBERT LEARMONTH,

Send for Catalogue. 200 Bouck Ave., BUFFALO, N. Y.

Boats for Amateur Builders.



All designs shown in my new "ALBUM OF DESIGNS" to scale as indexed or enlarged full size very cheap.

SPECIAL DESIGNS TO ORDER.

Patterns, Moulds and Instructions to Amateur Builders.

Small Steam and Sailing Craft Built and Rigged entirely or in part.

Stem and Stern Posts, Keels, Frames furnished worked in the wood. All kind of boats set up frame and shipped "knockdown" to any part of the world.

SEND 50 CENTS FOR 72-PAGE "ALBUM OF DESIGNS."

FRED W. MARTIN, Yacht Designer, North Chicago, Ill., FORMERLY RACINE, WIS.

Youghiogheny River Coal Co.

Miner and Shipper of

OCEAN, YOUGHIOGHENY GAS AND STEAM **COAL.**

General Office: Erie, Pa. Long Distance 'Phone 409.

Shipping Docks: Ashtabula, O. Long Distance 'Phone 76.

VESSELS FUELED AT ALL HOURS

ELECTRIC LIGHT.

WITH OCEAN COAL ONLY, BY STEAM LIGHTER OR CAR DUMP.

The Cuddy-Mullen Coal Co.

Miners and Shippers of **STEAM COAL**

FUELING DEPARTMENT FACILITIES.

CLEVELAND HARBOR.—Car Dumper; Eight Pockets, 1000 Tons Capacity; Lighter Steam Derricks.

DETROIT RIVER BRANCH.—Amherstburg: Four Pockets; Three Steam Derricks
SANDWICH—Fourteen Pockets and Two Steam Derricks.

"SOO" RIVER BRANCH.—Two Docks, (Formerly known as the Anthony and Watson Docks,) Equipped with Pockets and Steam Derricks.

GOOD COAL. COURTEOUS ATTENTION QUICK DISPATCH.

General Offices, Perry-Payne Bldg., Cleveland, O.

THE W. L. SCOTT COMPANY,

ERIE, PA.

WHOLESALE DEALER IN

Shamokin, Wilkesbarre Anthracite,
Youghiogheny, Mansfield, Pittsburg

Vessel Fueling a Specialty

by steam lighter or car dump, at all hours. Electric light.

...Coals

MAIN OFFICE: SCOTT BLOCK. LONG DISTANCE 'PHONE 440.

FUELING OFFICE: CANAL DOCK. LONG DISTANCE 'PHONE 320.

The Chase Machine Co.

MACHINISTS, ENGINEERS, BLACKSMITHS.

MANUFACTURERS OF

Land and Marine Engines and Steam Pumps.

SOLE OWNERS AND MANUFACTURERS OF THE

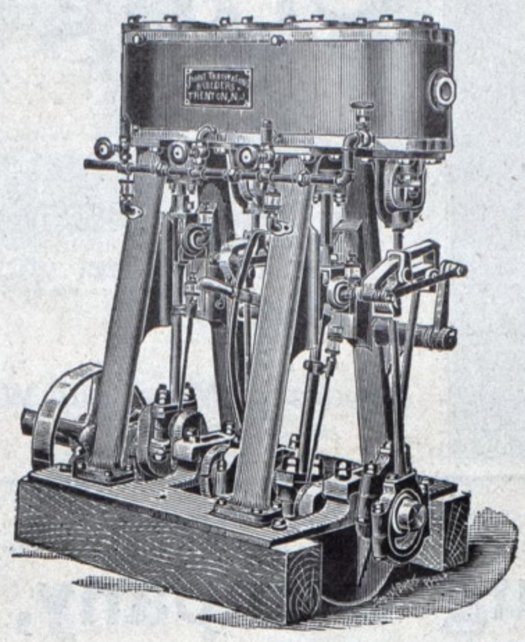
CHASE AUTOMATIC FOG WHISTLE MACHINE.

In use on nearly all Lake Steamers.

AGENTS FOR ASBESTOS STEAM, BOILER AND PIPE COVERING.

Telephone 994. 111 Elm St., CLEVELAND, O.

John E. Thropp & Sons' Co.



BUILDERS OF

Compound and Triple Expansion

ENGINES,

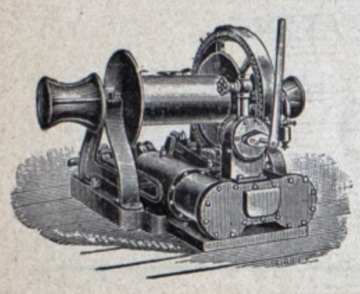
Boilers, Surface Condensers, Propeller Wheels, Etc.

Contracts taken for yachts and tugs complete. Send for photographs of Engines and descriptive pamphlet.

Works on Delaware & Raritan Canal Basin.

TRENTON, N. J.

NEW YORK OFFICE: 26 CORTLANDT ST.



Dock and Deck Hoists

ALL KINDS OF

Machinery and Friction Hoists.

Send for Prices and Circulars.

JACKSON & CHURCH, Saginaw, Mich.

DONNELLY CONTRACTING CO.

896 ELLICOTT SQUARE, BUFFALO, N. Y

CONTRACTORS AND CONSULTING ENGINEERS, HARBOR AND CANAL WORKS, ETC.

Simplest, Strongest and most Reliable. Changed from Steam to Hand or back by one lever in less than one Second.

No. 8 Beck Patent Steam and Hand Steering Gear.

BUILT BY

Pawling & Harnischfeger, Milwaukee, Wis.

BARRY'S—CHICAGO.

....DON'T FORGET THAT....

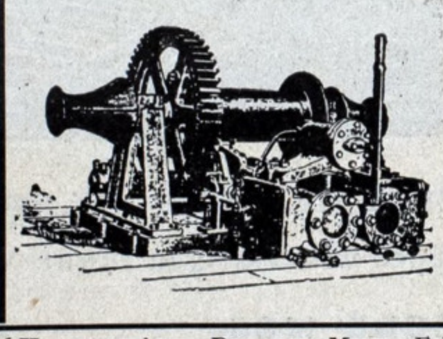
Barry Bros.' Independent Tug Line

Have a Wrecking Outfit. We have purchased the Grummond Wrecking Appliances, and are prepared to offer our patrons good service.

Office, 240 South Water Street.

TELEPHONE, MAIN 273.

Three Long Whistles Call our Tugs.



HOISTING ENGINES

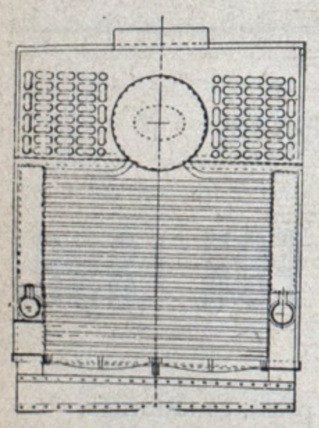
We build them in all sizes from new and improved designs. Every engine thoroughly tested before leaving our shop, and guaranteed to be satisfactory in every case.

MARINE IRON CO., BAY CITY MICH.

SHERIFFS MFG. CO.

ESTABLISHED 1854.

MILWAUKEE, WIS.



26 HANCOCK AVE., DETROIT, MICH., Feb. 9, 1897.

E. H. BRIDGES, Bay City, Mich.:

Dear Sir.—Replying to yours of the 9th, I have to say that I think the Flajole the best form of Water Tube Boiler made. The one I have seems a perfect steamer, and the question of durability seems the only one yet undecided, and that only time can tell. Yours truly.

R. J. CRAM.

The Flajole Sectional Water Tube Boiler.

Combines Small Space, Economy and Durability. Easy of Access for Repairs.

JOHN A. FLAJOLE, Cor. 2d and Saginaw Sts., Bay City, Mich.

J. H. OWEN, Pres., Chicago. F. H. VAN CLEVE, Sec., Escanaba. Capt. GEO. BARTLEY, Supt., Escanaba.

Escanaba Towing and Wrecking Co.

ESCANABA, MICH.

Tugs, Lighters, Steam Pumps, Hawsers, Hydraulic Jacks and Diving Appliances always ready

TUG MONARCH—Engine Compound, Cylinder 16 and 30 in. diameter, 30 in. stroke, steam pressure allowed 125 pounds. TUG DELTA—Cylinder 20 by 22, steam pressure allowed 105 pounds. TUG OWEN—Cylinder 20 by 20, steam pressure allowed, 104 pounds.

CENTRIFUGAL PUMPS. SEVEN AND FOURTEEN INCH SUCTION.

VESSEL SUPPLIES. TELEPHONE, MAIN 3411

D. C. DEEGAN,

Meats, Groceries and Provisions.

24 Rush Street. CHICAGO, ILL.

NEVERSINK CORK JACKET AND LIFE BELT.

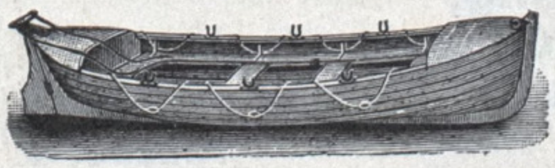
Warranted 24 lb. Buoyancy and full Weight of Cork, as required by U. S. Inspectors. **Consolidated Cork Life Preservers.** Superior to all others. **Rings Buoys and Fenders.** SAFEST CHEAPEST.

Approved and adopted by U. S. Board of Supervising Inspectors.

Also adopted by the principal Ocean, Lake and River Steamer Lines as the only Reliable Life Preserver. Vessels and trade supplied. Send for Catalogue.

Awardad four medals by World's Columbian Exposition.

METALLIC and WOODEN LIFE BOATS.



Metallic Life Rafts, Marine Drags.

Manufacturer of Woolsey's Patent Life Buoy, which is the lightest, cheapest and most compact Life Raft known. Send for illustrated catalogue. Get our prices before buying elsewhere.

D. KAHNWEILER, 437 Pearl St., New York City.

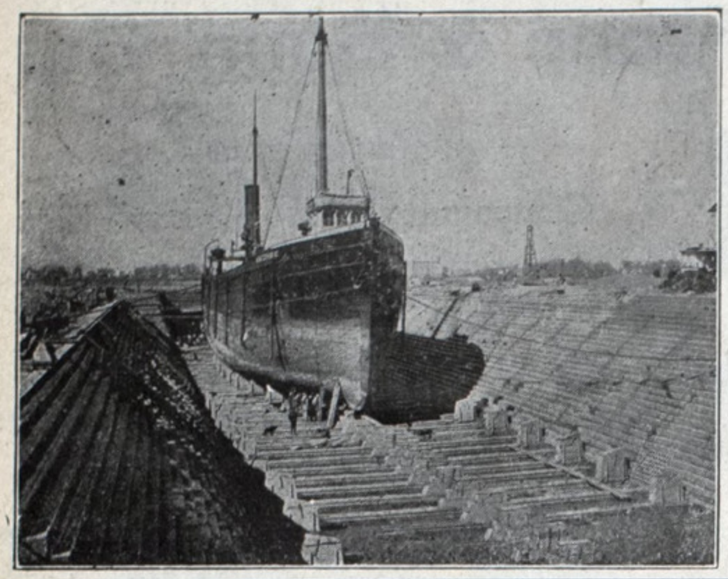
Dan'l McLeod,

MARINE SURVEYOR AND APPRAISER.

ALL HULL DAMAGE CASES PROMPTLY ASSESSED.

ORDERS SOLICITED.

713 Perry-Payne Bldg., Cleveland, O.



Craig Ship Building Co.

TOLEDO, OHIO.

New Dry-Dock 450 feet long, 110 feet wide on top, 55 feet wide on bottom, 16 feet water on sill.

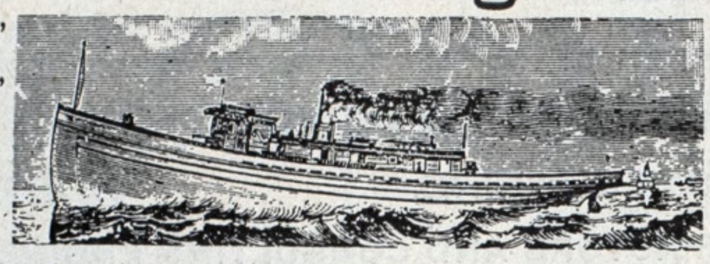
Repairs to Metal and Wooden Ships a Specialty.

Metal and Wooden Ship Builders.

H. A. HAWGOOD, Pres't. PHILIP MINCH, Vice-Pres't. C. A. MORGAN, Gen'l Mang'r. A. SMITH, Sec'y. R. SPRANKLE, Treas.

The Cleveland Tug Company,

First-class Tugs, Steam Pumps, Divers, Hawsers, Lifting Screws, Etc., furnished Promptly on Orders by Telegraph or otherwise.



Steamers when outside wanting our Tugs, blow one long whistle and as many short ones as they want tugs.

OPEN DAY and NIGHT. Long Distance Telephone 725.

OFFICE 23 RIVER ST.

The "CINCINNATI" Automatic Steam Steering Gear.

Simple, Powerful Machine. Noiseless and Sure. Send for Circular.

FRONTIER IRON WORKS, Detroit Mich. Agents for the Lakes.

American Steel Barge Co.

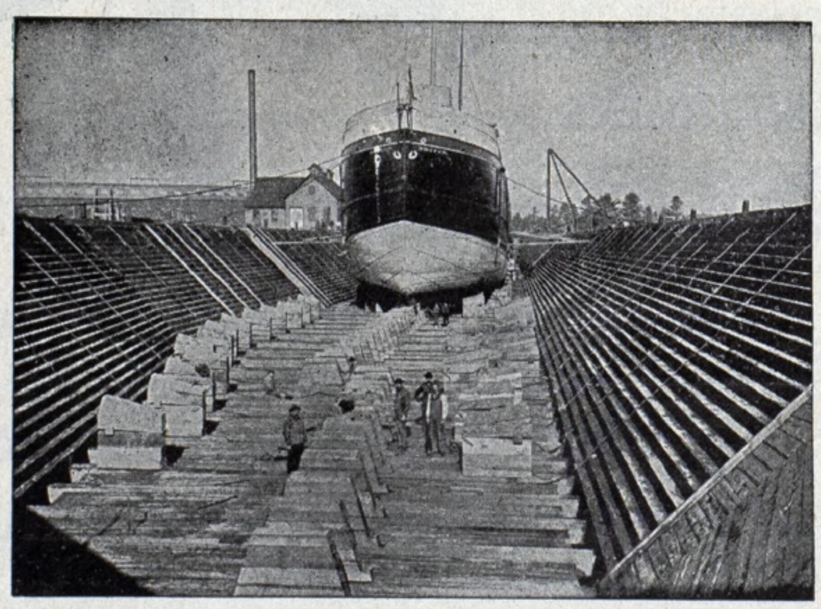
STEEL AND METAL SHIPS

Of all Classes built on shortest possible notice at our yards at

WEST SUPERIOR, WIS., and also at EVERETT, WASH.

PHOTOGRAPH OF 300-FOOT BOAT IN DOCK.

Plates and Material always on hand to repair all kinds of Metal Ships in Shortest Time.



Best Quality of Oak in Stock for Repairing Wooden Vessels of all Classes.

SIZE OF DOCK

Length, Extreme	537 feet.	Entrance, Top	55 feet 9 in.
Breadth, Top	90 " 4 in.	Entrance, Bottom	50 "
Breadth, Bottom	52 "	Depth over Sills	18 "

LARGEST DRY-DOCK ON THE LAKES.

Prices for Repairs and Docking same as at Lower Lake Ports.

SUPERIOR, WIS.

A Number of Propeller Wheels in Stock at Dry-Dock.

A. Gilmore's Sons,

Dry-Docking, Ship Building and Repairing.

EAST SIDE, NEAR IRONVILLE, - - - TOLEDO, O.

Dimensions of Dock, 236 feet long, 55 feet wide at top and 37 feet wide at gate. Nine feet water over sill. RATES OF DOCKING, Ten Cents per registered gross ton for vessels over 200 tons. Jig Mill and Planer in connection with Dock.

'PHONE NO. 157.

Paint Your Vessel with **Superior Graphite Paint**

NO BLISTERING, CRACKING OR SCALING.

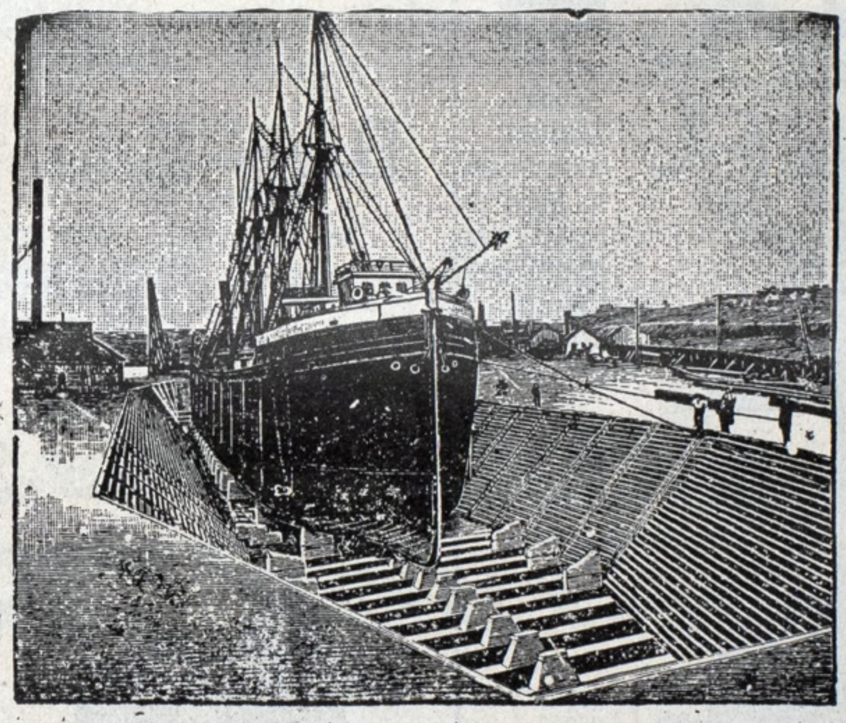
Made especially for Stacks, Decks, Sides, Hulls, and Water Compartments. Strictly Anti-Rust, and most durable and economical.

DETROIT GRAPHITE MFG. CO., 542 River St., Detroit, Mich.

C. H. HOYT, Agent, 60 Gladstone St., CLEVELAND, O.

THE SHIP OWNERS DRY DOCK CO.

Largest DOCK YARD on the GREAT LAKES.



Capacity with Two Docks to Dock the Largest Ships on the Lakes.

GENERAL REPAIR WORK PROMPTLY ATTENDED TO.

Being equipped with Lucigen Lights we do work at night as well as day.

TELEPHONE 1635. Foot of Weddell Street, CLEVELAND, O.

THE BEST BOOK OF AMERICAN LAKE SHIPPING.

BEESON'S MARINE DIRECTORY FOR 1898.

A cloth bound, gilt embossed volume of 258 pages, just from press, containing alphabetically arranged lists of all American steam and sail vessels on the Northwestern Lakes, giving tonnage, length, breadth and depth of each, place and year of build and name and address of managing owner. These lists are the originals published annually and are not taken from other publications. Their correctness is all that can be possibly obtained in a technical work.

Many miscellaneous features are comprehended in its contents. Among them a list of American lake ports, with description of each, numbering over two hundred.

This directory will be mailed to any address, postage prepaid, on receipt of subscription price, $5.00.

Address Harvey C. Beeson,

PUBLISHER,

308 Royal Insurance Bldg.

CHICAGO.